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GLOBAL ALLIANCE FOR THE

FUTURE OF FOOD

ADVANCING HEALTH AND WELL-BEING IN FOOD SYSTEMS: STRATEGIC OPPORTUNITIES FOR FUNDERS

This compendium of papers was commissioned by the Global Alliance for the Future of Food in collaboration with the authors for use by Global Alliance members to stimulate information-sharing, learning, and collective action. The Global Alliance has chosen to make it available to the broader community to contribute to thinking and discussion about sustainable food and agriculture systems reform. It constitutes the work of independent authors and any views expressed in this report do not necessarily represent the views of the Global Alliance nor of any of our members.

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ABOUT THE GLOBAL ALLIANCE

The Global Alliance for the Future of Food cultivates healthy, equitable, renewable, resilient, and culturally diverse food and agriculture systems shaped by people, communities, and their institutions.

The Global Alliance is a unique coalition of foundations committed to leveraging our resources to help shift food and agriculture systems towards greater sustainability, security, and equity. Plurality is the strength of the Global Alliance bringing together foundations, despite differences, from countries across the globe with diverse interests and expertise, spanning health, agriculture, food, conservation, cultural diversity and community well-being. At the core of the Global Alliance is a shared belief in the urgency of advancing sustainable global agriculture and food systems, and in the power of working together and with others to effect positive change.

ABOUT THE ADVANCING WELL-BEING WORKING GROUP

The Advancing Well-being Working Group is one of three Global Alliance Working Groups. Its goal is to strengthen the fundamental role that food systems play in creating and sustaining health and well-being in all communities and populations. We seek to promote policies and actions that: enhance access to healthy, high quality food at affordable prices through diverse outlets; minimize the marketing and distribution of foods that contribute to disease and inequities in health; support healthy and resilient community environments; and bolster vibrant cultural identities and traditions.

Its members include:

Marion Standish, Senior Advisor to the President, The California Endowment, USA (Working Group Lead)

Janis Berger, Board Secretary, New Field Foundation

Kyra Busch, Program Officer for Agrobiodiversity and Resilient Biocultural Landscapes, Christensen Fund, USA

Mathilde Douillet, Program Officer for Sustainable Food Systems and Diets, Fondation Daniel et Nina Carasso, France

Beth Hunter, Program Director, J.W. McConnell Family Foundation, Canada

Marie-Stéphane Maradeix, Executive Director, Fondation Daniel et Nina Carasso, France

Livia Marqués, Program Officer, W.K. Kellogg Foundation, USA

Ken Wilson, Executive Director, Christensen Fund, USA

ABOUT THE AUTHORS

Olivier de Schutter, Ph.D.

[Institute for Interdisciplinary Research in Legal Sciences,](#)
[Université Catholique de Louvain, Belgium](#)

Olivier de Schutter was the United Nations Special Rapporteur on the Right to Food, from 2008 to 2014. He is currently a member of the UN Committee on Economic, Social and Cultural Rights and co-chair of the International Panel of Experts on Sustainable Food Systems (IPES-Food). Between 2004 and 2008, he was the Secretary General of the International Federation for Human Rights, an international human rights umbrella organisation with 170 national-level member organisations. He is a professor at the University of Louvain (UCL) and at SciencesPo (Paris) and has been holding appointments at New York University (2004–2005), Columbia University (2008–2012), and UC Berkeley (2013–2014). His publications are in the area of economic and social rights and global governance.

Corinna Hawkes, Ph.D.

[Fellow, Centre for Food Policy, City University, London; Advisor,](#)
[Leverhulme Centre for Integrative Research into Agriculture and Health,](#)
[London, United Kingdom](#)

Corinna Hawkes has worked internationally for over 15 years analysing and promoting food system and food policy solutions for healthier eating, better nutrition and improved public health. She has been active in research, advocacy, and in advising governments and international agencies. Corinna has worked at the World Health Organization, the International Food Policy Research Institute, the School of Public Health at the University of Sao Paulo, Brazil, and as Head of Policy and Public Affairs at the World Cancer Research Fund International. She is an Honorary Research Fellow at the Centre for Food Policy, City University, London, and serves as an advisor at the Leverhulme Center for Integrative Research into Agriculture and Health.

Corinna sits on a number of expert panels and advisory committees, including International Panel of Experts on Sustainable Food Systems (IPES-Food) and the monitoring working group of the World Health Organization's Commission on Ending Childhood Obesity. Her research interests focus on the impact of food systems and food policies on diet, nutrition and non-communicable diseases. She has published widely in academic journals and in policy briefs and reports by think tanks and international agencies on topics such as food systems globalization; the links between agricultural policy, trade and nutrition; policies and regulations to encourage healthier diets; and novel food value chain approaches to identifying solutions. Corinna's disciplinary background is in ecology and geography. She has a PhD from Kings College, University of London.

ABOUT THE AUTHORS

Hugh Joseph, Ph.D.

Assistant Professor, Adjunct, Friedman School of Nutrition
Science & Policy, Tufts University, Massachusetts, United States

Hugh Joseph has spent his career developing food systems initiatives at the local, regional and national levels across the United States. This includes founding or co-founding a dozen food system-related networks and collaboratives, and co-starting USDA's Community Food Projects and Farmers' Market Nutrition Program. He also founded the New Entry Sustainable Farming Project — a nationally prominent beginning farmer initiative - and currently leads a national educational enhancement program targeting refugee farmer training programs.

Dr. Joseph's current research at Tufts University (Boston, MA) includes sustainable dietary guidance; local produce quality improvement; refugee agriculture; and food systems theory and practice. He spearheads a "Guidance for Sustainable Diets Working Group" that is developing a framework-based process to promote sustainable food systems via dietary changes. Joseph holds an MS and PhD in Nutrition from Tufts University, where he is Assistant Professor (adjunct) in the Agriculture, Food and Environment Program at the Friedman School of Nutrition Science and Policy, and where he teaches graduate courses on food systems.

Kate Clancy, Ph.D.

Adjunct Professor, Friedman School of Nutrition Science & Policy, Tufts
University, Massachusetts, United States
Visiting Scholar, Center for a Livable Future, Johns Hopkins University
School of Public Health, Maryland, United States

Kate Clancy is currently a food systems consultant, Visiting Scholar at the Center for a Livable Future Johns Hopkins University School of Public Health, Adjunct Professor at Tufts University, and Senior Fellow in the Minnesota Institute for Sustainable Agriculture, University of Minnesota (she resides in University Park, Maryland). She did her doctorate in Nutrition at the University of California, Berkeley. Her resume includes positions at Cornell and Syracuse University and sabbatical appointments at the Universities of Wisconsin and Minnesota. She worked as a nutrition and policy advisor at the Federal Trade Commission, and at several nonprofits such as the Wallace Center. Clancy developed a graduate course on food systems in 1982 and since then has published, taught, spoken, and consulted widely on sustainable agriculture, food systems, and food policy with government agencies, universities, and nonprofits around the country. She has promoted the idea of sustainable diets since 1984. She has served on many boards including the Food and Drug Administration Food Advisory Council. She is the deputy director of the USDA-funded five-year EFSNE systems project in the Northeast United

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States, and engaged with many initiatives including Agriculture of the Middle and It Takes a Region. She was a member of the Institute of Medicine committee that recently published a framework to assess the health, environmental, social, and economic effects of the US food system.

Molly Anderson, Ph.D.

[Partridge Chair in Food and Sustainable Agriculture Systems,](#)
[College of the Atlantic, Maine, United States](#)

Molly Anderson has focused her career on food systems, studying science and policy from the perspectives of farmers, consumers and citizen activists. She is especially interested in effective multi-stakeholder collaborations for sustainability, food security, food politics, food rights, food sovereignty and sustainability metrics. Molly has consulted for domestic and international organizations on social justice, ecological integrity, strategic planning and food system metrics. She held two interim positions at Oxfam America 2002–2005 and a faculty position at Tufts University, where she taught, administered programs, built partnerships and conducted research for 14 years. She was the founding director of the Agriculture, Food and Environment Graduate Degree Program in the School of Nutrition Science & Policy at Tufts. She also directed Tufts Institute of the Environment for two years. She was a national Food & Society Policy Fellow 2002–2004 and a Senior Wallace Fellow at Winrock International.

Molly serves on several advisory boards and committees related to sustainable agriculture and food systems. She is on the Standards Committee for the ANSI Sustainable Agriculture Standards initiative and various committees for the Farm to Institution New England, the Inter-Institutional Network for Food, Agriculture & Sustainability, and Food Solutions New England. She is also on the Editorial Board of the Journal of Hunger and Environmental Nutrition. She served as a Coordinating Lead Author on the International Assessment of Agricultural Knowledge, Science and Technology for Development. Molly earned a Ph.D. in Systems Ecology from the University of North Carolina at Chapel Hill (with emphases in agroecology and anthropology) and a M.S. in Range Science, a B.S. in Range Ecology and a Certificate in Latin American Studies from Colorado State University.

Bama Athreya, Ph.D.

[Senior Specialist, Labor and Employment Rights, United States Agency for International Development \(USAID\)](#)

Bama Athreya has 20 years experience on international labor rights issues, and has previously worked for the AFL-CIO Solidarity Center, International

ABOUT THE AUTHORS

Labor Rights Forum, and International Labour Organization. She has developed and led multi-country projects in Latin America, sub-Saharan Africa and Asia on the rights of working women, on labor law implementation, on forced and child labor, and on ethical business practices. She has developed and led multi-stakeholder initiatives with global corporations on labor compliance, and has worked and written extensively on labor rights in US trade policy. She served as one of the founding Board members of the Sweatfree Purchasing Consortium, an entity serving state and city governments in the United States who have adopted legislative or executive commitments to ethical procurement. In 2009 she was appointed by Secretary of Agriculture Tom Vilsack to a special Consultative Group on Forced and Child Labor. She speaks French, Spanish, Chinese and Indonesian.

FOREWORD

This compendium contains four papers commissioned by the [Advancing Well-Being Working Group of the Global Alliance for the Future of Food](#). The topics it addresses match up with the Working Group's four strategies for action:

- **Institutional Food:** To promote the widespread adoption of healthy, sustainably-sourced foods by institutions in the public and private sector.
- **NCDs:** To make the case to funders and policy makers that the rising incidence of chronic, non-communicable diseases (NCDs), and associated health care costs, are externalities of food system policies, and to encourage those institutions to become advocates for changes to food system policies.
- **Dietary Guidelines:** To advance food-based dietary guidelines which promote environmental sustainability and respect cultural values.
- **Workers' Rights:** To promote innovative strategies for linking sustainable food practices with policies that improve the health and well-being of farmers and food system workers.

Our four Working Group strategies came about through a process of dialogue amongst Working Group members and with experts-in-the-field, in which we sought to identify the most potent opportunities to advance our Working Group goal:

To strengthen the fundamental role that food systems play in creating and sustaining health and well-being in all communities and populations. We seek to promote policies and actions that: enhance access to healthy, high quality food at affordable prices through diverse outlets; minimize the marketing and distribution of foods that contribute to disease and inequities in health; support healthy and resilient community environments; and bolster vibrant cultural identities and traditions.

The papers were commissioned from key thought leaders on food systems and public health to help the Working Group gain a bird's eye view of: each strategic area; effective actions already happening in this area; challenges and barriers to change; and, recommendations for funders wishing to make a positive impact. The Working Group is in the process of using this information to help finalize a collective action plan that will guide our work together for the next 1–2 years.

We believe that this requires both thoughtfulness and urgency. Profound changes in the global food system¹ over the last decade have produced significant impacts on health and well-being that range from food security to chronic disease, economic opportunity, and culture. These impacts are experienced unequally across the globe and between different groups of people in different places. Narrowly defined indicators, focused exclusively on disease and/or mortality rates, limit the public and policymakers'

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understanding of the relationship between decisions affecting the food system and our health and well-being. As a result, policy or systems changes needed to strengthen the relationship between the food system and our health and well-being are missed. A broad, multi-sectoral, integrated, and long-term understanding of the multiple ways that the food systems affects well-being is largely absent from development projects, strategies, and evaluations.

As a result of food systems that ignore health and well-being, we experience impacts across the globe that include:

- Abundant and cheap food in some regions, yet people in those same regions struggling to secure sufficient quality food to be/stay healthy and thrive
- Food scarcity, malnutrition, and the loss of traditional food practices and consumption patterns
- Food production and marketing practices that promote processed foods with high calories and excess sodium rather than fiber-rich, whole foods, which contribute to a fast-moving obesity epidemic and rise in chronic diseases
- Pesticides, antibiotics, and other agricultural inputs that create new and dangerous health impacts
- Dependence on pesticides that create hazardous environmental conditions that impact well-being through poor air and water quality
- Dependence on a low wage, often migratory or undocumented workforce that is unlikely to be civically engaged and is easily and often exploited
- Concentrated poverty in rural, remote, and frontier communities with no access to social services, resources or economic opportunity
- The loss of traditional foods, harvest, production and preparation practices undermining cultural and community cohesion, identity, and in some instances (Indigenous populations) survival itself

The Advancing Well-Being Working Group believes that a food system that advances long-term well-being must: ensure access to healthy, high-quality food at affordable prices through diverse outlets; protect individuals from health dangers and hazards associated with the food supply; support healthy and resilient community environments and populations; and preserve cultural identity and traditions.²

A truly healthy food system will be built on a more integrated, multi-faceted, and holistic approach including nutrition, health, happiness, and social and cultural indicators interpreted together and in relation to each other within the context of healthy and well-functioning food and agricultural systems.

FOREWORD

This compendium represents a small step towards achieving our goal of healthy food systems by outlining some strategic opportunities for action. The word compendium derives from the Latin word "compenso", meaning "to weigh together or balance." The papers were written under a very tight timeline and, as such, should be considered first drafts, however, they provide us a means for weighing our priorities as we bring stakeholders together to advance the transition to food systems that prioritizes human health and well-being, and supports our planet as a whole. We invite you to engage in this dialogue together as we walk on this important and necessary journey towards a more livable, and more healthy, future.

- 1 A food system is "the way in which people organize in order to produce, distribute, and consume their food" (Louis Malassis, 1994, Feed the People, Dominos-Flammarion). A food system includes all processes and infrastructure involved in feeding a population: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items. It also includes the inputs needed and outputs generated at each of these steps. Systems bring together a wide spectrum of players — from producers to consumers to food companies, distribution outlets, governments, and international institutions. Food systems call different sustainability dimensions into question: environmental, social, economic and nutritional ones.
 - 2 While the working group definition aims to elevate the "well-being" component of a healthy food system, the FAO definition provides a broader, useful and important context in which to situate the working group definition: A food system that advances long-term well-being must: ensure a low environmental impacts and contribute to food and nutrition security and to healthy life for present and future generations. Sustainable food systems are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable, nutritionally adequate, safe and healthy, while optimizing natural and human resources.
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INSTITUTIONAL FOOD PURCHASING AS A TOOL FOR FOOD SYSTEMS REFORM

Olivier de Schutter, Ph.D.

Institute for Interdisciplinary Research in Legal Studies

Université Catholique de Louvain, Belgium

EXECUTIVE SUMMARY

This report addresses how institutional food purchasing — by schools, administrations, or hospitals — may contribute to the transition to sustainable food systems. It does so on the basis of a review of a range of examples from all world regions.

Part I of the report examines the major arguments in favor of making institutional purchasing more "responsible", i.e., more supportive of the transition to sustainable food systems. Part II then lists the key principles that organisations may wish to consider in designing food purchasing policies with the greatest impact on the transition to sustainable food systems, including by the much needed relocalization of food systems and the strengthening of local "food hubs". Institutional food purchasing, it suggests, should: (a) target vulnerable groups such as small-scale food producers or family farmers, that are currently penalized under prevailing market conditions; (b) ensure that producers receive remunerative prices for their production and that farmworkers benefit from living wages; (c) guarantee that diets are sufficiently diverse to ensure that individuals have access to the full range of micronutrients required, and that the food provided is culturally acceptable; (d) ensure environmental sustainability; (e) rely on contracts that are fair and applied transparently; and (f) increase empowerment, participation, and accountability in the food system.

These principles should be seen as broad guidelines. Not all principles are applicable to all situations. Some will be more relevant to low-income countries in which a large part of the population relies on farming as a source of subsistence; others will apply primarily to middle-income or high-income countries, where a well-developed industrialized food system is dominant, shaping consumers' choices and at the same time catering to the needs of a predominantly urban population that relies on semi-processed or heavily processed foods. But the principles do provide a framework for deliberating about which solutions should be explored in particular contexts.

Part III explores the roles that foundations have played, and could play, in encouraging the use of institutional food purchasing policies for food systems reform. This part proposes a typology of interventions, emphasizing the benefits of an approach that is based on a form of subsidiarity. Foundations may intervene to help overcome market failures in certain cases, where local and sustainable food systems cannot emerge,

but in other cases they will be more effective by providing support to the actions of local actors that support local initiatives and allow them to be networked with one another and to form synergies. They may also work in support of local public authorities for territorial approaches to food systems reform to be strengthened; and they may support actions that improve "voice", or democracy, in food systems.

Key recommendations to funders are listed in Part IV.

INTRODUCTION

The Challenges of Today's Food Systems

The food systems we have inherited from the 20th century are focused on maximizing production, by encouraging concentration and economies of scale, and the reliance on industrial modes of production. Such systems are highly productive insofar as productivity is measured as the output per active agricultural laborer, since they favor the replacement of workforce by machines through the development of large monocultures that can be easily mechanized. These monocultures in turn result in, and are made possible by, a heavy reliance on synthetic (nitrogen-based) fertilizers and pesticides, and the generalized use of industrially produced varieties of seeds.

A range of negative consequences are associated with this approach, however, that are now widely acknowledged to have been underestimated when this approach was launched a century ago.¹ These consequences include:

1. a highly inefficient use of energy in food systems, both at farm level (as the use of nitrogen-based fertilizers and mechanisation require large amounts of energy) and at other segments of the chain (for the transport of inputs and harvests, for the processing of raw materials, for the packaging, transport and storage of processed foods);
2. significant environmental consequences, ranging from the growth of greenhouse gas emissions (nitrous oxide from the use of chemical fertilizers, carbon dioxide from the reliance on fossil energies, and methane resulting from landfills and from the livestock industry)² to genetic erosion (the loss of biodiversity)³, and including the pollution of water through nitrogen and phosphates runoff (leading to the uncontrolled growth of algae threatening fishstocks in certain zones, a phenomenon known as eutrophication)⁴ as well as the degradation of soil health (as unsustainable agricultural practices have gradually robbed soil from its nutrients, leading to a reduced nutritional content of cultivated crops)⁵;

3. increased concentration of farms, with smaller production units being squeezed out of business as a result of their inability to achieve economies of scale similar to those of their larger competitors, resulting in a depopulation of rural areas and a lack of rural development;
4. public health consequences, as agricultural producers were gradually transformed into suppliers of cheap (heavily subsidized) raw materials for the food processing industry (particularly by the massive encouragement to the production of cereals (wheat, maize) as well as soybean), encouraging diets relying more heavily on animal proteins (fed with cereals and soymeal) and on processed foods generally higher in saturated fats, added sugars (including high-fructose corn syrup) and salt, as well as on energy-dense but nutrient-poor snacks;
5. overproduction creating gluts on international markets and artificially lowering the prices of food commodities on these markets, actively discouraging both governments and the private sector to invest in agriculture in the global South, except for some tropical commodities that can be competitive on a global scale and reach the high-value markets of OECD countries.

A Solutions-Oriented Approach

A shift is urgently needed towards alternative, more sustainable approaches. Such approaches should:

1. Reduce the dependency of food production and distribution on fossil energies, to the fullest extent possible;
2. Rely on agro-ecological modes of production, through the recycling of agricultural waste and the local production of inputs, as well as through techniques such as soil fertilization through leguminous plants, biological control, and the search for agro-sylvo-pastoral complementarities at field level;
3. Create well-paid jobs, at all segments of the food system, and ensure that the incomes of agricultural producers are less dependent on public subsidies alone and that they receive a fair price for their produce, while at the same time allowing access to adequate diets for consumers, including consumers from low-income families; and
4. Move away from an emphasis on export-led agriculture and the search for competitiveness on global markets, and towards food systems focused instead on achieving well-being for the local communities and delivering healthy diets.

The Role of Food Purchasing

The food procurement policies of organisations such as schools, hospitals or administrations have a key role to play in achieving this transformation. Public policies at all levels of government, from the local school board or the municipality to the national government and the international agencies responsible for food aid programmes, are one important lever in this regard. Particularly in high-income countries, the weight of the public sector is important, and procurement for public institutions is therefore an important lever for change: public procurement alone represents on average 12% of the GDP in OECD countries, and between 6 and 10% of the GDP in all regions combined.⁶ Food procurement represents a significant portion of such public procurement: it includes public school meal programmes, food provision and food-related services for cafeterias in civil service buildings, hospitals, prisons, schools, universities, as well as social programmes such as in-kind transfers (the distribution of food aid to families in need) or social restaurants.

The figures involved are impressive.⁷ Governments are increasingly understanding the role they may play in this process of transformation, by using the power of the public purse. Sustainable public procurement was identified as a key area of work for the 10-Year Framework of Programs (10YFP) on sustainable consumption and production mandated by the Johannesburg Plan of Action adopted at the 2002 World Summit on Sustainable Development.⁸ In 2011, the United Nations Secretary-General recalled that procurement can ‘harness the power of the supply chain to improve people’s lives’, and emphasized that the enormous purchasing power of international organizations — the UN bought \$14.5 billion worth of goods and services in 2010 (approximately €10 billion) — can exert a positive influence on economic systems to the benefit of people.⁹

School meal programs play a major role in this development, in part because such programs also allow to improve the right to education in developing countries, with a particular benefit to the increase of girls’ attendance of schools. The expansion of local school meal programmes increasing reliance on homegrown foods was identified by the 2005 World Summit among the four “quick-impact initiatives” that should be implemented to achieve the Millennium Development Goals.¹⁰ School feeding programmes exist in almost all high- and middle-income countries, as well as in 70 out of the 108 low- and middle-income countries, with support from the World Food Programme.¹¹ Brazil increased its budget for its National School Feeding Programme fourfold between 2003 and 2011.¹² In the United States, the Department of Agriculture (USDA) funded 221 projects under the Farm to School grant program in 49 states, the District of Columbia, and the Virgin Islands since this program was

launched in 2013, including by supporting efforts to bring local or regionally produced foods into school cafeterias. In December 2014, eight states were selected to participate in the Pilot Project for Procurement of Unprocessed Fruits and Vegetables, as directed under the 2014 Farm Bill.¹³ California, Connecticut, Michigan, New York, Oregon, Virginia, Washington, and Wisconsin therefore will be able to increase their purchases of locally-grown fruits and vegetables for their school meal programs.

Other procurement schemes hold even greater economic significance. This is the case especially for in-kind food aid programmes managed by public authorities. In 2010–11, federal food subsidies in India (in-kind transfers of grain for the most part) accounted for 0.9% of India's GDP, while federal and state food subsidies accounted for 2.7% of total annual expenditure incurred by Indian Federal and state governments.¹⁴

The public sector is not alone, however, to be equipped to mobilize institutional purchasing as a means to achieve a transformation towards sustainable food systems. Private schools or catering companies, as well as private hospitals or residences for the elderly, can also play a significant role. School procurement policies can encourage the relocalization of diets, and they may also provide an opportunity to provide nutrition education to children, and thereby to reach families, for instance in order to encourage populations to shift to traditional, locally-grown foods; they allow to reconnect children to the sources of their foods, for instance where school meal programs are integrated with vegetable gardens maintained on the school premises¹⁵; and they may create or re-establish community links through the school's projects.

What is Included in this Report

This report assesses the potential of sustainable food procurement by organizations, both private and public. It asks how private foundations can support such policies, which forms such support could take, on the basis of which criteria they might operate, and which legal constraints could apply. The report does not address the full range of food purchasing policies by private actors, including food processing companies or large retailers who have increasingly integrated sustainable development within their policies. Nor does the report address a range of tools implying the purchasing of food that foundations also may wish to support — and indeed have supported in the past or are supporting — but that do not involve the large organisations mentioned above — public administrations, hospitals, or schools.¹⁶

This report is based on a review of practices of institutional food purchasing, highlighting good practices in particular, and illustrating the multiplier effects that can result from such practices — for local economic

development, improved health and educational outcomes, reduced ecological footprint of food production, and social justice. It is not a legal brief. However, OECD countries typically impose legal restrictions on public authorities in the area of procurement, in order to ensure that they will not discriminate between potential suppliers. Such rules are codified, in particular, in the Government Procurement Agreement (GPA) of the World Trade Organisation, revised most recently in 2014, and (for the European Union member States) in the newly adopted Directive on public procurements (2014/24/EU). Appendixes 3 and 4 summarize the state of play as regards these instruments. The general trend has been, clearly, to relax the requirements imposed on public authorities, in order to allow public procurement to take into account non-economic considerations, and thus to contribute to the reform of food systems.

I. FOOD PROCUREMENT POLICIES: GENERATING COMMUNITY VALUE

Moving beyond cost considerations

A range of institutional purchasing programmes have been reviewed in preparation of this study (for examples, see the chart in Appendix 1 and see Boxes 1 and 2). In a growing number of these programmes, low prices now appear less determinative than other factors, including: the geographic origin of the food (as regards unprocessed, fresh foods) or of the processing of the food (for processed food products); the nutritional content of the food (in order to promote healthy diets and mitigate the spread of obesity); the identity of the farmers supplying the programme (preference being given to small-scale, marginalized farmers); and the environmental standards complied with in the production of food (including a requirement that source be produced organically). Each of these criteria has its own rationale and presents its own challenges, summarized in the following table.

1 INSTITUTIONAL FOOD PURCHASING AS A TOOL FOR FOOD SYSTEMS REFORM

Table 1. Non-economic considerations on institutional food purchasing — the key rationales and associated challenges

Criterion	Rationale	Main challenges
<i>Sourcing food locally</i>	Four rationales explain the emphasis on sourcing food locally. i. By buying from local producers, organisations support local economic development, stimulating demand-led growth of the local economy, with strong multiplier effects ("spatial keynesianism"). ii. It is expected that the reduction of "food miles" shall reduce the negative environmental impacts of food transport. iii. Shorter food chains have beneficial impacts on the quality of nutrition, improving access to fresh foods and reducing the risk of foods losing part of their nutritious qualities due to having traveled long distances, thus increasing the time between harvest and consumption. iv. Local sourcing to a certain extent levels the playing field between smaller-size production units and larger agriculture producers, the latter being generally better positioned on large markets given their superior logistics and networks.	i. The first rationale is sometimes criticized as fuelling nativist sentiments or even reactionary politics.¹⁷ ii. "Food miles" is a poor proxy for the environmental sustainability of food production and sourcing: instead, a full life-cycle approach should be adopted, taking into account the additional environmental implications (especially in increased use of energy) of producing in locations that are not well suited to that purpose.¹⁸ As regards public procurement schemes, explicit references to local producers (i.e., to the geographical origin of the food that is procured) may be in violation of legal rules seeking to preserve competition between potential suppliers and to avoid protectionism; however, this would not appear to be an insuperable obstacle, as the legal regimes governing public procurement are evolving in order to favor a greater reliance on environmental and social considerations and as various legal techniques allow to overcome this restriction (see Appendixes 3 and 4).
<i>Sourcing food complying with certain nutritional requirements</i>	In 2010, elevated bodily mass index (BMI) (i.e., overweight (BMI>25) and obesity (BMI>30)) was responsible for 2.8 deaths globally; no country to date has reversed its obesity epidemic. Diets (combined with the lack of physical activity) play a major role in this worrying trend, that is having a major impact on health care costs in all countries.¹⁹	
<i>Sourcing food from small-scale farmers</i>	The objective here is to kick-start a process of agricultural transformation for the reduction of rural poverty (in developing countries) or for supporting family farms to support rural development, by improving the ability for small-size producers to serve markets. Institutional purchasing makes it less costly and less risky for small-scale food producers to engage with input and output markets. The demand for food in social interventions is highly predictable, allowing farmers to plan production accordingly.²⁰	Unless affirmatively supported, many small-scale farmers may not be able to seize the opportunities provided by targeted institutional purchasing, because of the various obstacles they face. These obstacles include limited access to suitable storage and post-harvest handling infrastructure, resulting in post-harvest losses and spoilage; shortcomings in the ability of farmers' organizations to help farmers improve productivity, pool marketable volumes, improve quality, identify markets, and negotiate sales; lack of access to markets, credit and information about market dynamics.²¹

Table 1. Non-economic considerations on institutional food purchasing — the key rationales and associated challenges (continued)

Criterion	Rationale	Main challenges
<i>Sourcing food produced according to certain environmental standards</i>	Ensuring that food producers rely on agroecological principles, reducing the use of external inputs and maintaining soil health. This concern sometimes translates into a requirement that food suppliers practice organic farming, although the two requirements (organic farming and agroecological farming) should not be confused with one another.	Concerns are regularly expressed that the imposition of standards related to organic farming, set unilaterally by buyers, may increase the dualization of the farming sector and have exclusionary impacts on small-scale farmers in particular (see Appendix 2). These concerns are less relevant as regards agroecological farming, however the question does arise as to how a requirement that the supplier rely on agroecological methods can be effectively enforced. Whatever the standard used, capacity-building, in order to ensure that the food producer shall be able to comply with the standards imposed, is essential.

Escaping the traps of "value for money" approaches: the role of full accounting

Institutional food purchasing which relies on sustainability criteria listed in table 1 implies that the cheapest option will not always be the preferred option. This tradeoff is may be especially difficult to address for the private entity, since such an entity shall not directly benefit from the positive externalities resulting from improved purchasing practices: rather, for a private entity that does not benefit directly from the savings to the public budget that responsible purchasing practices may allow, the prioritization of sustainability-based considerations above purely price-based considerations should be seen as a service to the community. Where the private entity concerned is established for profit, moreover, the decision to shift to responsible purchasing may be in tension with the fiduciary duty towards the shareholders or the expectations of the investors. As to food purchasing by public entities such as schools or administrations, they face budget constraints and a range of countries have therefore developed cost-based contracting cultures that systematically favour 'low cost' options by stressing value for money in a limited sense.²²

The tendency to favor low-cost options has favoured traders, intermediaries, and large-scale corporate agri-food companies that have developed a buyer power enabling them to exert downward pressure on the prices they pay to farmers. It is based, however, on an accounting illusion: the real costs of food that is produced according to conventional norms of production and processing (i.e., through the "mainstream" food system, in the current institutional and market framework), once we take into account the social and environmental associated with the dominant model, are significantly higher than the market price, due to the failure to internalize negative externalities.²³

Therefore, the introduction and generalization of full accounting methods may convince public entities to understand the economic rationale of relying on sustainable procurement practices, rather than to focus on price alone. Indeed, full accounting allows to see the introduction of considerations related to compliance with environmental standards, adequate diets, or social equity, as well as local sourcing, as investments which, in the long run, are beneficial to healthy public budgets.

To illustrate, consider some figures that have been calculated in the course of the debate on public procurement:

- The total incremental benefits of supplying 50 million primary school-age children in Africa with locally produced food could potentially amount to about US\$ 1.6 billion per year in 2003 prices (€1.3 billion); of this total, 57 % would accrue to consumers and 43 % to producers.²⁴
- In the United Kingdom, using the Social Return on Investment (SROI) analysis, a holistic cost and benefit analysis that evaluates activities across the 'triple bottom line' of social, environmental and economic impacts, it has been estimated that additional spending for sustainable and local procurement of school food generated a return of £3 for every £1 spent, in programmes implemented in Nottinghamshire and Plymouth. The benefits largely accrue to local businesses, who gain additional contracts and incomes (nearly 70% of the total value generated in Nottinghamshire); to local employees who can access additional jobs, enhanced job security, and well-being benefits (15%); to state/central government given the reduced demand for unemployment benefits (10%); to the city council (3%), which benefited from the higher take-up of school meals after the reforms and to the environment (2%), through reduced transportation impacts, although the methodology is incomplete on this last aspect. In Nottinghamshire, the total value generated is over £5 million each year for additional investment of £1.65 million.²⁵ In East Ayrshire (Scotland), school food reform has produced a SROI index of above 6, meaning that 'for every £1 invested in the initiative, over £6 of value is created in economic, social, environmental and other outcomes'.²⁶ These figures do not take into account any of the health, educational or cultural benefits of a 'whole school approach' to food.
- In countries with rising obesity rates, healthier food options through more responsible public purchasing of food can save on health care costs. In the United Kingdom, low cost public procurement for school feeding programmes were found to be one of the causes of the high rate of child obesity:²⁷ the government spends more money on treating diabetes in three days than it spends on the School Lunch Grant in an entire year,²⁸ leading to calls for 'value for money to be assessed on a whole life basis'.²⁹

In the United Kingdom, additional spending for sustainable and local procurement of school food generated a return of £3 for every £1 spent — and sometimes up to £6.

- School feeding programmes have been known to have important positive impacts on education and nutrition outcomes in developing countries.³⁰ But the lessons prove to be just as valid for wealthy countries: In the United Kingdom, the shift from low-budget processed meals towards healthier options in 80 schools from the Greenwich district of South-East London as part of the “Jamie Oliver Feed Me Better” campaign has led to significant improvements in educational outcomes, including a 4% improvement in the number of pupils aged 11 reaching a high level in English tests, a 6% improvement in the number reaching high level in Science tests as well as a 15% fall in absenteeism — most likely linked to illness and health.³¹

In the United Kingdom, the shift to healthier options in schools led to a 6% improvement in the number reaching high level in Science tests and to a 15% fall in absenteeism.

Box 1. Africa's Home-grown School Feeding Programmes

In 2003, African governments included a Home-Grown School Feeding Programme (HGSFP) in the Comprehensive Africa Agriculture Development Programme (CAADP), the agricultural programme of the African Union's New Partnership for Africa's Development (NEPAD). The programme takes note of the need to provide 50 million African school children with adequate nourishment, while stimulating local food production altogether. HGSF programmes are school feeding programmes that provide food produced and purchased within a country to the extent possible. The United Nations World Food Programme (WFP) has collaborated with the Bill and Melinda Gates Foundation, the New Partnership for Africa's Development (NEPAD) and other partners to encourage the development of HGSF programmes. Such programmes link school feeding programmes with local small-scale farmer production by creating an ongoing market for small food producers. Homegrown school feeding programmes now exist in various countries such as Ghana, Nigeria, Kenya as well as Thailand and Japan, and have been conducted on a national scale in Ghana and Nigeria.³² Such programmes have received increased attention from a range of development actors, including States, donors, international agencies, and philanthropic foundations.³³ A global network has been created.³⁴

Box 2. The 'Purchase for Progress' pilot initiative of the World Food Programme

In September 2008, the World Food Programme (WFP) formally launched its Purchase for Progress (P4P) initiative, which is probably now the best known example of a programme that aims at enhancing the development impact of food procurement activities. According to the WFP, P4P exemplifies the shift from food aid to food assistance that characterises its 2008-2013 strategic plan.³⁵ The P4P initiative is a five-year pilot programme that includes 21 countries in Africa, Asia and Central America, supported by the Food and Agriculture Organization of the U.N. (FAO), the Bill and Melinda Gates Foundation, the Howard G. Buffett Foundation and various donors.

As of 31 December 2011, WFP had concluded P4P purchase contracts for over 207,000 tons of food valued at US\$75 million (€ 57.7 million). This represented about 9.9% percent of the total purchases in volume and 6.8% in economic value.³⁶

Table 2. Six principles to ensure food procurement policies will contribute to the transition to sustainable food systems

Non-economic objectives of institutional purchasing	Principles for public procurement schemes
<i>Improving access to markets and adequate remuneration for small-scale food producers</i>	Principle #1: Source preferentially from small-scale food producers and actively empower them to access tenders
<i>Ensuring an adequate remuneration for all actors of the food system</i>	Principle #2: Guarantee living wages as well as fair and remunerative prices along the food supply chain
<i>Promoting healthy diets</i>	Principle #3: Set specific requirements for adequate food diets
<i>Encouraging environmental sustainability</i>	Principle #4: Source locally whenever possible and impose on suppliers that they produce food according to sustainable methods
<i>Guaranteeing fair contractual relationships</i>	Principle #5: Design contracts that will benefit suppliers and ensure that they capture a fair portion of the value
<i>Improving participation, accountability, empowerment and coherence in policy-making</i>	Principle #6: Increase participation and accountability in the food system

Principle #1: Source preferentially from small-scale food producers

Procurement schemes should include clear procurement modalities favouring small-scale food producers. This may be done through a variety of legal techniques, for instance by introducing selection or award criteria favouring certain type of producers, by splitting the contract into small portions so as to ensure that smaller-size producers will have an incentive to apply, by reserving certain quotas of the full procurement to small-scale food producers or by sourcing from them exclusively, or by choosing products mostly grown by small-scale farmers such as specific local types and varieties. Such affirmative policies in favor of smaller-size suppliers may be justified since traders and large-scale economic actors otherwise have significant advantages over small-scale producers: they have established processes, experience with public tenders as well as with establishing relationships with large private organizations, more working capital and better access to finance.³⁷ Most importantly, due to the economies of scale they can achieve and to various network effects, they are generally better positioned to make offers at the economically most advantageous (i.e., lowest) price.

In Brazil, the law now provides that a minimum of 30% of the funds dedicated to the National School Feeding Programme, now covering more than 49 million children, must be used to buy food sourced from family-based farms.

How to define the beneficiaries? Targeting suppliers.

In developing countries, the most commonly used criteria are the surface of land owned by the farmer and the level of poverty; occasionally the definition may also seek to encourage farmers to join a cooperative:

- The Home-Grown School Feeding Programmes (HGSF) led by the WFP, for instance, target farmers who: own less than 3 hectares of land; face food insecurity and/or are living on less than \$2/day; have a reputation for hard work; have potential for increasing yields; belong to a membership-based cooperative or are willing to join a membership-based cooperative; and are located in areas where other agricultural aid agencies are present.³⁸
- In the WFP's P4P initiative, the maximum farm size for accessing the programme varies from country to country (2 hectares in Ethiopia and Rwanda and 10 hectares in Mali and Burkina Faso).³⁹ In certain contexts, targeting women farmers is also vital to effectively benefit vulnerable and food-insecure groups.⁴⁰ The P4P initiative aims to count 50 per cent of women among beneficiaries, and is already approaching this target in many countries, with the notable exception of Ethiopia.⁴¹
- Brazil's Act No.11, 947 of 16 June 2009 provides that a minimum of 30 % of the financial resources transferred by the federal government to states and municipalities in order to implement the National School Feeding Programme (PNAE), now covering more than 49 million

children, must be used to buy food sourced from family-based farms, including indigenous communities, *Quilombolas* (descendants of Afro-Brazilian slaves), and beneficiaries of land redistribution programmes. Family farmers are legally defined in Brazil's National Family Farming Act (Law 11.326) according to four requirements: the rural establishment (or undertaking area of activity) must not exceed four agrarian units (a measure defined by each municipality on the basis of prevailing agro-ecological conditions); the labour used in the related activities must be predominantly family-based; the family's income must come primarily from farming and smallholding activities; and the holding must be directly managed by the family.⁴² In 2010, public authorities indicated that 1,576 municipalities were buying products from local family-based farms.⁴³

- In OECD countries, local authorities that reformed their public procurement policies have mostly tried to deliberately source from 'local' producers rather than from 'small-scale' food producers. However, in Scotland, the local council of East Ayrshire introduced a sophisticated tendering process that included the division of the contract into smaller parcels, and increased flexibility in regard to EU fruit and vegetable marketing standards in order to enable smaller suppliers and organic producers to access the programme.⁴⁴ In Italy, the municipality of Rome sources 2% of the food served in the city's schools from social cooperatives that employ former prisoners or work land seized from the Mafia.⁴⁵

In Scotland, smaller-size farms were encouraged to supply local public authorities after the contract was divided into smaller parcels, and after the implementation of EU fruit and vegetable marketing standards were made more flexible.

How to ensure potential beneficiaries will be reached?

WFP's P4P pilot programme implements 'smallholder-friendly' procurement modalities, i.e. which have specifically been designed to deal with the difficulties that small-scale farmers face in selling to the WFP. These modalities include among others *pro-smallholder competitive tendering* (competitive tendering practices that are better suited to the needs of farmers organizations and small/medium traders, involving reducing tender sizes and waiver of the requirement of bag marking); *direct contracting* (purchasing directly from farmers' associations, sometimes through a warehouse receipt system that encourages the participation of small-scale farmers); and *forward contracting* (allowing for the use of contracts that specify a minimum price that WFP will pay upon future delivery, thereby reducing farmers' risk).⁴⁶

These procurement modalities are not intended as long-term solutions, however. In the WFP's strategy, the P4P initiative aims to enable small farmers to gradually engage in formal markets, which for WFP means competitive tenders. The measures are designed to address specific constraints for a fixed period while farmers' organizations or small traders

develop the capacity to engage with markets without external support. The anticipated transition through the procurement modalities is from direct contracting through forward contracting to competitive tendering. WFP country offices are encouraged to consider an 'up or out' strategy: they reassess their support to participants that fail to develop the capacity to engage in formal markets.⁴⁷

These strategies to affirmatively include small-scale food producers matter because, for the reasons mentioned above (Table 1), preferential sourcing from such farmers (alternatively referred to as "family farmers") may not succeed unless accompanied with measures actively supporting the targeted producers to access tenders. This may include, in particular:

- encouraging the organisation of small-scale food producers in farmers' organizations;
- providing legal assistance to farmers or improving their legal literacy;
- hiring trained personnel to help them comply with administrative hurdles; or
- improving their access to loans or other forms of support.

Box 3. India's Public Distribution System (PDS) as a tool to improve access to markets for farmers from less favored regions

India's Public Distribution System (PDS) provides an example of how geographical targeting (in this case, decentralization) may indirectly result in improved integration of certain (otherwise underprivileged) farmers. The PDS procures, stores, rations and subsidises the retailing of major staple food grains through an important network of government warehouses and food retail outlets. In 2012, more than 85 million tonnes of rice and wheat were held in stock.⁴⁸ However, although it is an important component of India's national food security strategy and is the main vehicle of the procurement of subsidized food to millions of food-insecure households, the PDS does not integrate modalities to source preferentially from small-scale food producers.⁴⁹ The PDS has nonetheless made efforts to decentralize its procurement policy in a way that prepares the ground for more ambitious geographical and social targeting on the purchasing side. Public procurement schemes could have greater impacts on the incomes of depressed farming areas, and by extension on alleviating food insecurity, by sourcing agricultural products not only from bread-basket regions — such as Punjab in the case of India — but from all regions of a country. This also may improve efficiency and cut transportation costs.⁵⁰

The National Food Security Act, No. 20 of 2013⁵¹ provides that the Central Government, the State Governments and the local authorities shall advance food and nutritional security, by striving to progressively realise certain objectives, including the revitalization of agriculture and improvements in procurement, storage and movement related interventions in the management of food stocks (s 31 and Schedule III). The revitalisation of agriculture includes "ensuring livelihood security to farmers by way of remunerative prices, access to inputs, credit, irrigation, power, crop insurance, etc."; and reforms in procurement include "incentivising decentralised procurement including procurement of coarse grains" and "geographical diversification of procurement operations".

In some cases, reaching out to small-scale farmers required to introduce an exception in regulatory frameworks that, for public contracts, may require competitive bidding processes: Brazil's Food Purchasing Programme (Programa de Aquisição de Alimentos, PAA), established in

2003 to supply social assistance networks and to build a strategic food reserve, allowed for the public purchase of food items by the National Food Supply Company (CONAB) from targeted family-based farms, without a competitive bidding procedure. The food acquired by the PAA is channelled to local institutions serving food-insecure populations (including community kitchens and popular distribution centres).

Thus, preferential sourcing from small-scale food producers should go hand in hand with building the capacity of small-scale producers' organisations to grow, process and sell their produce. Capacity-building activities include training farmers and farmers' organizations in commodity handling and storage, warehouse operation, quality standards, quality control, and relationship building with market actors, in order to enable them to aggregate and market greater quantities of quality products. Other specific interventions may be required to tackle the barriers these food producers face to entering tenders, including practical interventions such as supporting transportation for harvesting and access to equipment.

Capacity-building activities are included in Brazil's Food Purchasing Programme (PAA) as well as in the P4P initiative:

- In Brazil, in addition to improving infrastructures to help family farmers deliver the agreed products, the PAA explicitly targeted farmers' organisations (certain sub-programmes require public purchases to be made from formal groups and are thus only accessible to farmers' organizations)⁵² and enabled organized family farmers to access rural credit.
- In the WFP's P4P initiative, training sessions have taken place to enhance the ability of its recipients to achieve the quality standards required by WFP, reduce losses, and preserve the quality of foodstuffs during storage.⁵³

In addition to capacity building, public authorities should also take into account the risks that small-scale food producers may be encouraged to take on in order to enjoy the expected benefits of selling to procurement schemes. Public procurement guarantees, to a certain extent, access to market at remunerative prices — although how strong a guarantee this represents, and how remunerative the prices, shall depend on the specificities of each programme. On the other hand however, joining such programmes may require that farmers purchase certain inputs and invest in new technologies, or that they specialize in one crop — in other terms, take greater risks and shift to a more highly capitalized form of farming. Empowering food producers means designing, where relevant, appropriate mitigation and response strategies.⁵⁴

Principle #2: Guarantee living wages as well as fair and remunerative prices along the food supply chain

The stronger the requirements are imposing payment of a living wage to waged workers employed by the beneficiaries of procurement schemes, and the better the remuneration of producers entering the scheme, the more procurement policies will contribute to improving livelihoods and to multiplier effects on the local economy.

1) A 'living wage' for all workers. Buyers should ensure that contractors pay a 'living wage' to all waged workers — a wage that “provides an income allowing workers to support themselves and their families”, as required under the International Covenant on Economic, Social and Cultural Rights.⁵⁵ They should also monitor compliance with labour legislation: only companies paying living wages and complying with their obligations towards their employees should be able to access open tenders for public procurement.

2) A fair and remunerative farmgate price for producers. Independent small-scale food producers should also be paid fair and remunerative prices for their products. In Brazil for instance, beneficiary farmers of the PAA food purchasing programme received three times the income of non-beneficiaries, who have limited bargaining power with intermediaries.⁵⁶ Inclusion in the PAA means predictable demand and hence basic income security for family farmers, who can sell to the programme at market prices until they reach a predefined (financial) threshold.

The pricing mechanisms should, at a minimum, be clear and transparent.⁵⁷ Ideally, it should replicate the formula used in fair trade schemes. Under this model, the producer should be guaranteed a fixed minimum price based on the need to meet sustainable production costs and to ensure a living wage for all the workers concerned (including family members, where applicable), but the prices paid by the buyer should be higher if market prices increase. This is the price-setting mechanism used, for instance, by MBSA, a joint venture producing biodiesel from jatropha in collaboration with smallholders in Mali and Burkina Faso, with support from Dutch private institutional investors and the Dutch government: the farmers, represented through a union of cooperatives, are guaranteed a minimum price, which may increase relative to the price of the diesel at the pump. This eliminates the temptation of side-selling by the producer, which avoids the need for the buyer to closely monitor the producer's operations; it therefore guarantees a stable supply for the buyer, while at the same time reducing the transaction costs linked with the contracting of a large number of small-scale suppliers. Fair trade contracts thus allow long-term planning and sustainable production practices; they are the result of a negotiation with farmers' organizations, and suppliers are paid a substantial share of the payment up front.⁵⁸

Institutional food purchasing could seek inspiration from fair trade principles, under which the producer is guaranteed a fixed minimum price, but benefits if market prices increase. This eliminates the temptation of side-selling by the producer and guarantees a stable supply for the buyer, while at the same time allowing long-term planning and sustainable production practices.

Indeed, the introduction of fair trade criteria as such is another example of how procurement can contribute to fairer pricing. Over 1,100 towns in 18 countries make commitments to increase their sourcing of fair trade products under the International Fair Trade Towns Campaign. Spain has passed a Law on Public Procurement allowing for the inclusion of fair trade criteria in public procurement,⁵⁹ and in Italy, seven regions (Toscana, Abruzzo, Umbria, Liguria, Marche and Friuli Venezia Giulia) have adopted the practice.⁶⁰ Many other examples could be cited in which, with or without explicit legislative authorization, local authorities rely on fair trade criteria in their public procurement policies.

After Scotland invested more than 110\$ million to improve the quality of school meals, 77% of the parents expressed satisfaction, saying that the scheme was a good use of taxpayers' money.

Box 4. The Minimum Support Price (MSP) in India's Public Distribution Scheme (PDS) pro-curement policy

The Minimum Support Price (MSP) of India's PDS procurement policy demonstrates the centrality of pricing questions to any procurement scheme. The Food Corporation of India procures wheat and rice through purchase centres at pre-announced procurement prices (Minimum Support Price) that are set by the central government. The food is then sold to state civil supplies corporations or food corporations at the Central Issue Price (CIP) that is also set by the government. The state then distributes the food to those below the poverty line through fair price shops or ration shops at 'ration' or 'issue' prices. The cost incurred by FCI in this operation is reimbursed by the central government. The National Food Security Act, No. 20 of 2013,⁶¹ confirms the reference to a minimum support price, though without setting precise reference levels at which this price should be set by the Central Government (s 2, (10)).

Principle #3: Set specific requirements for adequate and healthy diets

In order to contribute to sustainable food systems, procurement schemes should promote diversified diets and facilitate access to nutritious, micronutrient-rich fresh foods, especially for vulnerable poor consumers; preferably by integrating targets in order to decrease consumption of fats, sugars, salt and animal proteins. This is especially urgent in countries with rising child obesity levels. Consider these examples:

- In Brazil, the National School Feeding Program, a major component of the Zero Hunger strategy benefiting 49 million children, not only targets malnourishment, in particular in the North and North East, but also looks to address obesity through the composition of school meals.⁶²
- Scotland invested £63.5 million (approx. US\$114 million — €93 million) in school food reforms from 2003–2006 after an expert panel commissioned by the Scottish government called for a radical reform of the school meals service, which would include a new system of

nutrient-based standards.⁶³ The reforms significantly increased users' satisfaction with the service: 67% of children think that school meals taste better and 77% of parents think the scheme is a good use of taxpayers' money.⁶⁴

- In Italy, where a healthy school meal service is considered as part of children's right to education and health,⁶⁵ the City of Rome has been taking the lead, through a range of initiatives to promote healthy food, as well as introducing several food education initiatives.
- In England, the government agreed in 2006 to recommendations made by the School Meals Review Panel in its report 'Turning the Tables', including the importance of school lunches to be 'free from low-quality meat products, fizzy drinks, crisps, and chocolate or other confectionary', the need for pupils to be served 'a minimum of two portions of fruit and vegetables with every meal', and the restriction of deep-fried items to no more than two portions in a week.⁶⁵ In addition, the Food for Life Partnership (FFLP) led to implement the whole-school approach to 2,700 schools in England between 2007 and 2012.

Principle #4: Source locally as a matter of priority, where there are local options available, and favor suppliers that rely on environmentally sound methods

Public procurement schemes should discriminate in favour of sustainably sourced food, in line with the need to make the transition towards low-carbon and low-external-input modes of production, including agro-ecological practices.⁶⁷ Public procurement schemes should also aim at supplying locally and seasonally, so as to reduce the ecological footprint of the food produced, keeping in mind however that the reduction of food miles is not necessarily the most environmentally sustainable solution.⁶⁸

An increasing number of procurement schemes already bring territorial and seasonal dimensions into public procurement:

- In Italy, the towns of Fanano, Ascoli and Borgo San Lorenzo have implemented home-grown school feeding programmes (HGSF), giving priority to local products.⁶⁹
- In Scotland, the reforms of school food procurement resulted in a 70% reduction in food miles.⁷⁰
- In Japan, the practice known as *chisan chishou* (literally: local production and local consumption) connects schools to local farming or fishing communities.⁷¹
- In the United States, more than 1000 schools in 38 states, engaged in the Farm to School movement, aim to increase the role of fresh and local products in diets.⁷²
- In France, similar initiatives have been promoted within the recent French National Food Programme (*Programme National pour l'Alimentation*).

- In Canada, following a workshop between the Group Purchasing Organization and its suppliers which helped to dispel the myth that local sourcing is inherently problematic, the Nutrition Group at St. Joseph's Health System, Group Purchasing Organization and My Sustainable Canada have sourced food for 28 healthcare facilities in the province of Ontario, increasing local food procurement by 15%.⁷³

Many public purchasing programmes also target organic farming and seek to promote agroecological practices:

- Brazil's Public Food Acquisition Programme (PAA) offers strong price incentives (an additional 30 per cent) to organic farmers,⁷⁴ and the federal government aims to procure 'agroecological food products' from 25,000 small food producers by 2015.⁷⁵
- Italy passed a law in 1999 explicitly promoting the use of organic, typical and traditional products in public procurement. The City of Rome took a leading role in improving its school service, which serves 150,000 children. A permanent roundtable was established to ensure dialogue between city authorities and contracted suppliers, who were encouraged to improve the sustainability of their products, including the use of fair trade products and the introduction of food education initiatives, through various award criteria. In 2010, 14% of the food served in the city's schools was certified as fair trade, 26% was local, and 67.5% was organic.⁷⁶
- In Scotland, the sophisticated tendering process initiated by the county of East Ayrshire included increased flexibility in regard to EU fruit and vegetable marketing standards in order to enable smaller organic producers to access the programme.⁷⁷

These initiatives are part of a broader trend: more than 50% of OECD countries reported in a survey conducted in 2007 that they had amended their legislation in order to introduce environmental criteria into public procurement.⁷⁸

Principle #5: Designing contracts that are fair and inclusive

Procurement rely on contract farming, establishing a long-term relationship between the supplier and the buying entity, typically on the basis of predetermined prices, reducing the risk both for the supplier and the buyer.⁷⁹ Contract farming has gained importance in recent years both in developed and developing countries.⁸⁰ Under certain conditions, it can help in the development of localized food chains, for instance by linking farmers' cooperatives to the local food-processing industry or to local fresh produce retailers serving urban consumers. At the same time however, farmers can easily become disempowered by the process. Depending on the context, the following five questions may be relevant to assess the adequacy of a particular contract:⁸¹

1. Is the arrangement economically viable for all parties? If it appears unviable, the contract may be terminated or the buyer may renege on obligations when under financial stress, with detrimental consequences for the livelihoods of farmers. Conversely however, if the arrangement is not viable for the farmer, for instance because of an unsustainable debt, the buyer will face supply problems in the short term, and will incur high reputational costs with other farmers which may make it more difficult for him to enter into arrangements with other producers in the longer term. One frequent problem encountered in this regard is that the costs of participation in such arrangements may be disproportionate for small-scale farmers, since fixed costs, including costs for the payment of extension services or costs associated with reporting on compliance with conditionalities, are highest for the smaller-size production units (on the potentially exclusionary impacts of environmental standards, see Appendix 2).

2. Are both parties negotiating on equal footing? Because small-scale farmers are in a comparatively weaker bargaining position, they should have the opportunity to contribute to the wording of contract provisions, ensuring that the contracts reflect the farmers' needs and that obligations are written in terminology that the farmers will understand. Indeed, farmers typically have less information and negotiating skills than their business partners, and a lower degree of legal literacy.⁸² The way prices are determined, the deductions for the provision of inputs, the conditions under which the contract can be terminated, or the way the quality grading of the produce is assessed are all areas in which contractual clauses may be heavily biased in the favour of the buyer. Under such clauses, firms may for instance reject delivered products by stating falsely that they do not conform to quality regulations, thus transferring financial losses to farmers when market prices are low; they can manipulate prices when the price mechanism specified by the contract is not transparent, using complex price formulas, quantity measurements or price measurements; or they can manipulate delivery schedules to benefit from market price changes or from changes in a product's qualities upon which prices are based (for example, delaying the purchase of sugarcane when prices are based on the level of sucrose, because sucrose levels decline rapidly after harvest).⁸³ This further reinforces the importance of Principle #2 suggested above.

3. Are women's rights fully respected? This condition is relevant in developing countries in which women face discrimination in access to land, often as a result of social norms and customary forms of tenure rather than as a result of legal regulations alone. In order to mitigate the risk that gender-based discrimination will be replicated in the contractual schemes, contracts should be put in the woman's name where it is expected that the woman would be the main person working on the farm, or, in the case of a couple, in the names of both parties. It should not automatically be in the

name of the male head of household or the male holder of the title to the land cultivated. Indeed, it has been found by numerous studies that unless proactive action is taken in this regard women shall benefit less than men from contract farming. A study found that in the Kenyan horticulture export industry for instance, women comprised fewer than 10 percent of contracted farmers, and in a sample of 59 contract farmers for French beans exported from Senegal, only one was a woman.⁸⁴

The ability for women to benefit from contract farming is mediated by their rights over land, and by the power relationships both within households or, when the contract is negotiated through representatives of the community or the farmers' organisation, within these groups. Indeed, even where most of the work is in fact performed by the wife and other family members, it is not unusual for the contract to be signed by the husband, as head of the household, as seen in sugar contract farming in South Africa or in vegetable contract farming in the Indian Punjab.⁸⁵ In addition, studies suggest that women lose control over decision-making when crops are produced for cash rather than for feeding the local community: while women decide about the use of food produced for self-consumption, they do not decide how the monetary income of the household is spent. Therefore, unless the framework for contract farming is gender sensitive, it will weaken the situation of women vis-à-vis men.⁸⁶ Research done on bean contract farming in Kenya shows for instance that while women performed most of the work, they received a limited portion of the revenues from the contract; in addition, where they received cash, they were expected to contribute to the expenditures of the household even where this would normally have been the husband's responsibility.⁸⁷ Strengthening the position of women is not only a matter of guaranteeing the right to equality of treatment. It also can lead to productivity improvements, since women receiving a greater proportion of the crop income will have a greater incentive to increase production. In addition, household food security and children's health, nutrition and education, all gain from improved incomes for women, in comparison to the gains that would result from improved incomes for men. The more women decide on how to spend the household's income, the more it will be spent on children's needs⁸⁸: a child's chances of survival increase by 20 per cent when the mother controls the household budget.⁸⁹

4. Are the quality standards clear enough? Standards must be clear and specific so that firms cannot manipulate the application of vague standards. On the other hand, they should not be too complex, which could also allow firms to manipulate standards. Firms should demonstrate the standards visually to farmers, and explain in advance how crops are graded.

5. Are there dispute settlement procedures in place? Contracts should facilitate communication between parties through appropriate management structures and should identify ways of resolving disputes. In the vast majority of cases where one of the parties fails to comply with the requirements of the contract, there is no resort to courts because the sums involved are too small and because, in many developing countries, courts are in practice inaccessible to the rural poor. Therefore, other forums should be established in which farmers can raise concerns and conflict mediation by non-governmental organizations or third parties.

Principle #6: Increase participation and accountability in the food system

The establishment of procurement schemes provide an opportunity for empowering a range of actors who are commonly marginalized in market-oriented food chains, including elected representatives (decentralized local authorities such as municipal councils), school authorities, students, parents, local producers, and nutrition experts. This can be achieved by increasing participation in the design, implementation and assessment of the procurement schemes, and by ensuring that relevant actors and institutions are held accountable to citizens. Such participation was at the heart of the success of recent innovative procurement initiatives. Improved participation and accountability, ideally, should be complemented by a coherent, inter-ministerial approach to ensure that the benefits secured by progressive procurement methods are not undermined by conflicting policies or developments.

Specific measures ensuring the equitable representation of women on committees representing contracted suppliers could be established. Procurement contracts should facilitate communication between parties through appropriate management structures and should identify ways of resolving disputes. While the legal system is one of the main accountability mechanisms available, other mechanisms should be established. Among them are negotiation spaces, independent arbitration mechanisms, fora in which contractors, consumers and others actors engaged in food procurement schemes can raise concerns, and conflict mediation by third parties. Regular meetings should be organized between the parties to ensure a consistent flow of communication so as to identify problems at an early stage.

Multi-level governance systems can effectively empower local actors and reinforce democratic choices in food systems:

- In Brazil, the participation of municipal and state governments, schools, producers, enterprises, parents and students in the design of school meals, facilitated by the decentralization and localization of the

school feeding programme, was a key factor in its success. New institutions, in particular the School Feeding Committees (*Conselho de Alimentação Escolar*), ensure that school menus are nutritionally and culturally adequate.⁹⁰ They have contributed to increasing efficiency and accountability by helping local actors to monitor the flow of funds, to negotiate the budget, and also to create various partnerships, including with wholesalers.⁹¹ In 2010, such committees had been established in about half of the more than 5,500 municipalities in Brazil, giving social legitimacy to the programme and improving political accountability.⁹²

- In Scotland, producers and consumers were actively engaged in the school food reform in various ways, resulting in the empowerment of decentralized public authorities.⁹³

The promotion of homegrown food in HGSF programmes empowers not only farmers, who have new opportunities to sell their products, but also consumers — such as parents and teachers — who can initiate negotiations with local authorities on school meals. Food policy councils could play a similar role in the various localities, and at the different governance levels, where such councils have been established. Similarly, participatory budgetary initiatives could provide an opportunity to establish sustainable food systems, especially at the local level, by citizens voting to dedicate the budgets made available to encourage a responsible procurement of food for schools, hospitals, or other organisations.⁹⁴

In addition, public procurement policies should be integrated into national food and nutrition security strategies, ideally underpinned by framework laws, in order to improve consistency and efficiency in achieving food and nutrition security. Inter-sectoral consistency should also be improved through inter-ministerial and/or inter-departmental coordination mechanisms. In the context of its work on Home-Grown School Feeding programmes (HGSF), the World Food Programme observed that such programmes “should have clear political and legal foundations that establish the legitimacy of the programme and define its purpose within the policies of the social sector”.⁹⁵ This creates a stability of expectations, encouraging producers to invest, encouraging schools and other institutional actors to meet the cost increases that the transition to more sustainable schemes may lead to in the short term, and ensuring at all stages — from design to evaluation through implementation — accountability in the process. These are the key objectives that a legal and institutional framework for public procurement schemes should help to realize.

III. THE ROLE OF FOUNDATIONS

The review made of the role of philanthropic foundations illustrate the variety of means through which foundations may, and have, support the use of institutional food purchasing to support the shift to sustainable food systems. The means chosen fall in three broad categories. They can be ordered from the least political to the more political, or from forms of action aiming at (re)creating sustainable food systems by market interventions to forms of action that seek to encourage food democracy.

Directly supporting food systems reform: Foundations may act as intermediaries between consumers and local food producers, where the communication channels were broken — in other terms, where the local food system was "broken" and had to be rebuilt, and where citizens-led initiatives were clearly insufficient to achieve this. In the typology below, such interventions are called "local food systems creating". Foundations here intervene in order to overcome a market failure. Because of various lock-ins, including collective action problems making it difficult for consumers to organize themselves (which leads to various vulnerabilities as they fall prey to the dominant food system and appear unable to create alternatives without external support), the food system would not be reformed without a foundation stepping in to support the creation of an alternative.

Disseminating good practices: Foundations may act as "bridging organisations", i.e., groups that are established to support citizens-led initiatives and allow such initiatives to grow, to "scale out" from locality to locality, and to become a source of inspiration for other initiatives in other are-as.⁹⁶ These interventions are labeled "second-order supportive" in the typology below, because such interventions typically rely on existing community initiatives that are simply encouraged, or built upon, by groups favouring the emergence of networks to accelerate collective learning and achieving synergies between local-level initiatives. It has been noted that food systems reform is more effective when they are conceived as "bottom up", rooted in citizens-led initiatives or in initiatives from local actors prioritizing social and environmental values above economic values alone, than when they operate "top down", by changes being made (under regulatory pressure or through a change in economic incentives) to the mainstream food system.⁹⁷ Foundations are therefore likely to be more effective in the provision of support by empowering and equipping actors leading local initiatives, than by more direct interventions, that could crowd out the possibility of citizens-led initiatives emerging and result in a reduced ownership of reform processes.

Strengthening food democracy: Foundations may have interventions that are more explicitly political in nature, where they seek to address the political economy dimensions of food systems reform, ensuring that communities are given a greater voice in decision-making and are provided

space to invent their own solution. Interventions under the rubric encourage a new, emerging form of participatory democracy, perhaps most clearly illustrated by the emergence of food policy councils. They are grouped here under the label "food democracy enhancing" interventions.

1. Interventions to bolster local food systems

Support to the design of criteria (relating to adequate and healthy diets, to sustainable means of production, and to social equity including fair remuneration) for the development of responsible food purchasing policies. Where such support is provided, it would appear essential that the participatory dimension of the setting of criteria be stressed, in order to avoid the setting of criteria that may have exclusionary impacts on the smaller-size agricultural producers (see Appendix 2). These producers have a key role to play in the establishment of sustainable local food systems, yet are often marginalized in the current organization of the marketplace and whose views are not always taken into account in reform attempts. Moreover, taking into account the obstacles these agricultural producers face in complying with certain criteria, the capacity of these producers to respond to such exigencies should be strengthened, in particular through training and the encouragement of the setting up of cooperatives of producers which could provide support to their members. The support provided by the Daniel and Nina Carasso Foundation to the Fondation Nicolas Hulot pour la Nature et l'Homme (FNH) may be considered a good practice in this regard, since it includes both a participatory dimension in the setting of certification schemes and an attempt at capacity building.

Support to initiatives linking small-scale producers, particularly for fresh fruits and vegetables, to food aid programmes and social grocery stores. More could be done in this regard. Though attempts are being made in all regions to reform food aid programmes in order to encourage local sourcing, thus achieving multiplier effects throughout the local economy, many of these programmes still do not take into account other requirements of sustainability: they do not encourage healthy diets; and they do not support sustainable agriculture. While food aid corresponds to an urgent need as is seen as a humanitarian measure rather than as a right for beneficiaries, it remains important to see such programmes as a lever for the transition towards more sustainable practices: indeed, low-income families that depend on food aid are already the most severely impacted by overweight and obesity linked in poor food environments, and food aid providing heavily processed foods, which are energy-rich but nutrient-poor.

The Uniterres project, launched on an experimental basis in two pilot regions in 2012, aims at achieving this, with the Daniel and Nina Carasso Foundation providing support to the grouping of social groceries (Association Nationale des Epiceries Sociales et Solidaires (ANDES)) for

2013-2016.⁹⁸ Social groceries sell foods (of all food groups) at heavily discounted prices (10 to 30% of the normal retail price) in order to encourage accessibility of food to low-income populations.⁹⁹ The Uniterres project encourages such social groceries to source food locally, thus improving a stable access to markets to small-scale horticultural and improving their revenues, and at the same time improving the quality of diets for the beneficiaries.

Social groceries follow the well-known example of the Park Slope Food Coop in Brooklyn. Established already in 1973, the PSFC now counts 15,500 members, most of which put some voluntary work into the grocery every four weeks in order to be able to buy high-quality food, most of which is sourced locally, at a discount price. The DNCF supports a similar project launched in Paris in 2014, in the popular neighbourhood of La Goutte d'Or, with a membership of now more than 400 families.

Social or community-owned grocery stores, as described above, can also support the emergence of local food systems, by reconnecting local producers to local consumers. Though often seen as a way to link urban consumers to the rural hinterland of cities, support going to groceries may also be important for rural localities — small towns or villages — where small groceries are disappearing at a steady pace, with severe consequences on the life of the community and on the local economy. In the United Kingdom, the Plunkett Foundation therefore aims to support community shops, described as "sustainable, co-operative businesses that respond directly to local needs and help residents take control over the future of their communities and secure the provision of essential services".¹⁰⁰ 309 such community shops existed in the United Kingdom by the end of 2013, and the number is growing fast:¹⁰¹ such shops are community-owned, generally run by a management committee made up of members of the community, and as non-profit organisations (often organized as Industrial and Provident Societies for the Benefit of the Community, with an average membership of 184), they have a highly sustainable business model.¹⁰² The sourcing of food from local producers is one largely shared characteristic of these community shops: "95% of community shops stock and sell local food to some extent, and this was rated by shops as one of the most profitable lines. Of community shops that sell local produce, it represented an average of 23% of their total sales. Stocking and selling local food helps engagement with the local community, promotes the local economy, and benefits the environment through lower food miles".¹⁰³

Other initiatives include, for instance, online marketplaces connecting local food producers to organisations or families that wish to source food that is healthy, sustainably produced, and local. In Australia, the Open Food Foundation, established in 2012, launched the Open Food Network, with a

view to making it easier for people to source their food locally by setting up an application allowing them to identify producers or food hubs that are near to them.

2. Second-order supportive interventions

Interventions under this second category consist in foundations supporting networks of initiatives, and the groups or organisations organizing these networks, bringing together various initiatives. The support given by the J.W. McConnell Foundation to Food Secure Canada is typical in this regard. Food Secure Canada is a "bridging organization": not a market actor itself, it connects different local-level initiatives to one another, maximizing the ability for such initiatives to operate and to support each other mutually, and at the same time allowing these initiatives to gain visibility at the political level. "Second-order" interventions may also lead to the establishment of hybrid governance structures, as foundations may be led to cooperate with local public authorities and operate as "facilitators" of a dialogue between those authorities and the initiatives (or networks of initiatives) that they seek to support. Examples of such "second-order" interventions, in which foundations support the establishment of networks across initiatives, are the following:

Support to the establishment of internet websites documenting good practices in the area of responsible food purchasing, in order to accelerate collective learning. The Daniel and Nina Carasso Foundation, for instance, supports the Fondation Nicolas Hulot pour la Nature et l'Homme (FNH) to such effect, as well as the Agrocampus Ouest project (2013–2016), which should give greater visibility to the variety of projects (including in particular short circuits and social groceries) developing in the French region of Brittany. Another example of such a process is the recently launched Growing Food Connections initiative for a new database to collect examples of local policies in support of community food systems. The support provided by the John Merck Foundation to the Fair Food Network may also belong to this class of interventions: Fair Food Network launched a number of projects in Michigan, including Fair Food Detroit (that seeks to support initiatives to reconnect the low-income communities of Detroit with healthy and sustainable foods, produced by local farmers) and Strengthening Detroit Voices.

Support to initiatives aiming at rebuilding local food systems. The John Merck Fund supports, with many other donors, Farm Fresh Rhode Island, an initiative launched in 2004 that includes the creation of farmers' markets, the networking of local farmers and buyers by the organisation of a yearly "Local Food Forum", but also projects that directly encourage institutional purchasing as a means to rebuild local food systems, such as the Farm to Food Pantry (delivering fresh food overharvest to the needy)

or the Farm-to-School project.¹⁰⁴ Similarly, the Henry P. Kendall Foundation supports Food Solutions New England. This is an initiative housed at the University of New Hampshire Sustainability Institute (UNHSI) created in 2010 with the mission of "advancing a more sustainable and resilient food system in New England". The initiative is based on the realization that "despite the developing momentum to increase the production and consumption of New England grown food, ... stakeholders in the region remained largely unconnected to one another".¹⁰⁵ The FSNE therefore aims at building a network, as it is aware that only by connecting to one another various local-level initiatives, in order to identify synergies and accelerate collective learning, can a problem as complex as the building of a new local food system emerge.

Working with local public authorities to encourage a re-territorialisation of food systems, strengthening the connections between the local population and the local food producers. This is both for the benefit of improving access to fresh and healthy foods for the former, and of improving access to markets, in predictable conditions, for the latter. Thus, the Daniel and Nina Carasso Foundation supports one of the grouping of municipalities associated in the Biovallée project in Drôme provençale in the French region of Rhône-Alpes, launched in 2009 (and renewed in 2014) for an ecological transition at the scale of that territory (with a population of 57,000). A central component of the Biovallée project is the encouragement to switch to organic agriculture, and one tool to achieve this is the sourcing of food from local farmers practicing organic agriculture by school canteens. The DNCF supports a similar project in southern Brittany, led by the Groupement d'intérêt public (GIP) Pays de Vannes for 2014-2017 (covering a population of 215,000), and in which institutional food purchasing plays a key role.

3. Enhancing food democracy

The establishment of local food systems may also be encouraged by the creation of local food governance mechanisms, replicating the experience of the food policy councils that developed in the United States and in Canada: for instance, the John Merck Fund supported End Hunger Connecticut, for an amount of 9,000 USD, as an encouragement to the work of the Connecticut Food Policy Council; through the Fair Food Network, the John Merck Foundation also supported the Strengthening Detroit Voices project, which describes itself as aiming, "through a wide variety communications strategies, ... to make sure that Detroit's voices are heard by policy-makers, and that policy shifts occur at the local, state, and national levels to ensure progress in the area of food access and equity".¹⁰⁶ These initiatives are source of inspiration for similar experiments supported in France by the DNCF in Lille, Grenoble, and Lorient¹⁰⁷ under the Terres en Ville programme for 2014–2017.

IV. RECOMMENDATIONS FOR FUNDERS

The food systems we depend on are in urgent need of reform. They should reduce their de-pendency on fossil energy, maintain soil health and contribute to the maintenance of the ecosystems. The focus should shift from increasing volumes of production to contribution to health and well-being. They should contribute to greater equity for the benefit of all actors involved in them, and to the resilience of the communities that they serve.

Institutional purchasing by schools, hospitals and administrations, are a powerful tool to achieve this reform. Foundations can support the use of this tool at three levels, in a spirit of subsidiarity that best respects the ownership of food systems reform by the local communities concerned.

1. Foundations can directly intervene in order to help overcome the market failures that result in obstacles to the ability of organisations to rely more systematically on this tool. This can imply, for instance, supporting the organisation of small-scale food suppliers in cooperatives in order to allow them to strengthen their position as interlocutors of organisations and improve their access to markets; helping to design social, health and environmental criteria that can help define "responsible" purchasing practices; or, working on the retail end of food chains, they can support social grocery stores or community shops, to ensure that low-income households have access to healthy and sustainable diets.

2. Where initiatives are already taking place to favour responsible purchasing of food by organisations, foundations can provide "second-order" forms of support. They can do so by strengthening "bridging organisations" that establish links between such various initiatives, thus accelerating collective learning and allowing for a share of experiences. In addition, although the role of foundations in this regards is far less visible, they could do so by ensuring the required investments in infrastructure and logistics are made, allowing for the emergence of local food hubs which often depend on such conditions being created.

3. Foundations may support initiatives to increase "voice" in food system reform. This would enhance the possibilities for communities and their representatives to demand change, and specifically, to ensure that responsible institutional purchasing of food be supported, including by regulatory changes, by the sharing of good practices, and by strengthened support provided by public authorities to "bridging organisations".

At all three levels, close collaboration with the local public authorities may be recommended. This would allow moving beyond sectoral approaches to food systems (in which reforms are attempted separately in agricultural policies, in health care, in education, in rural development, etc.) towards integrated (trans-sectoral) reforms at the scale of certain

territories ("food hubs"). This territorialized approach favours coordination between various initiatives developing within a same territory. It allows for improved control and accountability towards the communities. And it favours "bottom up" food systems reform, relying on hybrid forms of governance and the joining up of citizens-led initiatives.

In these various roles that they play, foundations may wish to support forms of institutional purchasing that follow certain key principles, as identified in part II of this report, corresponding to the best practices identified that can maximize the transformative potential of institutional food purchasing.

APPENDICES

APPENDIX 1. Charting Institutional food purchasing, with illustrations

	Local governments ¹⁰⁸	National governments	International agencies	Private Sectors
<i>In general</i>	New York Local Law No. 50 (2011) provides that any New York agency (organisation partly or fully supported by New York treasury) shall be encouraged to "make best efforts to purchase New York state food", described as "food products whose essential components are grown, produced or harvested in New York state, and processed food that is processed in facilities located within New York state" The Baltimore Sustainability Plan adopted in 2009 (ordinance 09-141) refers to the need to "change purchasing specifications to give preference to local firms that pay a living wage and share profits and ownership with workers, or to those that will help the City establish a foothold in the emerging environmentally sustainable economy" and recommends "a strategy similar to that in Washington, DC, through which a 5% preference for local firms is given in procurement bids"¹⁰⁹ The Executive Directive on Healthy and Sustainable Food 09-03 adopted by the Mayor of San Francisco on 9 July 2009 provides that "city funding for food purchases or food programs shall meet nutritional guidelines developed by the City of San Francisco"¹¹⁰			

APPENDIX 1. Charting Institutional food purchasing, with illustrations (continued)

Local governments	National governments	International agencies	Private Sectors
School meals	In 2009, Brazil has integrated a re-quirement to source 30% of food from family farms and to prioritize non-processed, fresh foods from local farmers in the National School Feeding Programme (PNAE) In Bolivia, Law No 622 on School Feeding in the Framework of Food Sovereignty and Plural Economy, approved in February 2015 by the Plurinational Legislative Assembly, provides for the establishment of a school meals program sourcing from local producers. The law aims to contribute to educational performance and promote the permanence of students in the educational entities of the Plurinational Education System, through a safe, opportune and culturally appropriated diet.	The Purchase from Africans for African Programme (Ethiopia, Malawi, Mozambique, Niger, Senegal) prioritizes buying from local small-scale farmers in school meals programmes World Food Programme's Home-Grown School Feeding Programmes (HGSF)	
Hospitals	In the United Kingdom, the Hospital Food Standards Panel presented a report on standards for food and drink in public (NHS) hospitals, providing policy guidance (August 2014)¹¹¹		

APPENDIX 1. Charting Institutional food purchasing, with illustrations (continued)

Local governments	National governments	International agencies	Private Sectors
Public administrations	In the United Kingdom, the Government Buying Standard for food and catering services was introduced in 2011 and updated in July 2014. Its criteria cover three areas of sustainable procurement: • environmental sustainability (food produced to higher environmental standards, fish from sustainable sources, seasonal • fresh food), animal welfare and ethical trading • nutritional standards (to reduce salt, saturated fat and sugar and increase consumption of fibre, fish and fruit and vegetables) • procurement of catering operations to higher sustainability standards (including equipment, waste and energy management). Use of the GBS is mandatory for central Government, and strongly encouraged for the wider public sector.		
Food aid in kind serving low-income households		World Food Programme's Purchase for Progress (P4P)	French national grouping of social groceries (Association Nationale des Epiceries Sociales et Solidaires (ANDES)) sourcing fresh horticultural products from local producers under the Uniterres project 2013–2016.

APPENDIX 2. Does the imposition of environmental standards entail the risk of excluding from contracts the smaller-size agriculture producers?

There are a number of reasons to believe that the growth of standards may lead to worsen the current dualization of the farming sector, increasing the hurdles small-scale farmers face in having access to contracts. This has been amply documented as private standards have developed in global supply chains, at the initiative of buyers, in response to changing expectations of retailers and end consumers. For instance, in their study of the vegetable export chain in Senegal, Maertens and Swinnen conclude that tightening standards led to a shift from smallholder contract farming to integrated estate production.¹¹² It has also been reported that the sharp decline of the proportion of Kenyan smallholders contributing to the export earning of that country — from 70% in 1997 to 30% in 2000 — and especially the loss by 1,600 smallholders of their contracts with European retailers in 2002, were directly attributable to imposition by these retailers of new quality standards.¹¹³ Indeed, following the introduction and generalization of the *GLOBALGAP* standard,¹¹⁴ research into the horticultural sectors of Kenya and Zambia showed that “the average recurrent costs of *GLOBALGAP* compliance typically exceed half of the margin for [smallholders]”, often forcing them out of global supply chains.¹¹⁵ While smallholders may find it too costly to invest in complying with standards, those who source from them — especially the exporting companies who act as intermediaries between the producers and the retailers — may consider that the costs of monitoring compliance over a large number of units are too high, so that they are encouraged to switch from smallholders to larger commercial farms: this process has been well documented in a multi-year research programme on agrifood standards led in 2005–8 by IIED and NRI with the support of UK Department for International Development (DFID) and the Swiss Agency for Development and Cooperation (SDC).¹¹⁶ Studies have also shown that the practice of dominant UK groceries retailers of passing on to Kenyan producers the cost of compliance with the retailers’ private standards on hygiene, food safety and traceability has resulted in the moving away of food production from smallholders to large farms, and in an increase in vertical concentration as retailers seek to control more tightly the supply chains.¹¹⁷

APPENDIX 3. The impacts of the WTO Government Procurement Agreement (GPA) on public purchasing policies

The Government Procurement Agreement (GPA), a plurilateral agreement of the WTO revised in 2011–2014,¹¹⁸ imposes certain restrictions on the WTO Members that are parties to this undertaking.¹¹⁹ However, contrary to what is sometimes asserted, the GPA allows including considerations that are not purely economic in public tenders, even for public contracts that are above the minimum threshold negotiated by each Party and to which, therefore, the GPA applies (the GPA does not apply to purchases by private entities).¹²⁰ For instance, the Parties to the GPA may introduce clauses referring to labour rights or environmental standards in their public procurement schemes, provided this does not lead to discrimination between potential contractors from different countries.

Art VI.1 GPA like Art. X of the revised text allows procuring entities to lay down technical specifications including process and production methods (PPMs) as long as they do not create unnecessary obstacles to international trade.¹²¹ This provision does not make any distinction between product-related and non-product related specifications related to PPMs. Moreover, the revised text contains an important new provision (Art. X.6) which explicitly allows public authorities to adopt technical specifications to promote the conservation of natural resources or the protection of the environment. Though Article X.6 does not specifically mention any other “secondary” policy objective, the wording leaves no doubt as to other such objectives, including the protection of labour rights, could also be taken into account. Article VI.2(b) GPA and Article X.2(b) of the revised text provide that technical specifications shall, where appropriate, be based on international standards. Such standards must also be specified in terms of performance rather than design or descriptive characteristics.¹²²

The GPA prohibits any discrimination between suppliers of the Parties to the Agreement. The Parties commit to "accord immediately and unconditionally to the goods and services of any other Party and to the suppliers of any other Party offering the goods or services of any Party, treatment no less favourable than the treatment the Party, including its procuring entities, accords to: (a) domestic goods, services and suppliers [national treatment principle]; and (b) goods, services and suppliers of any other Party [most-favored nation principle]".¹²³ In addition, Article VIII.1 of the revised GPA states, with respect to the qualification of suppliers, that: "A procuring entity shall limit any conditions for participation in a procurement to those that are essential to ensure that a supplier has the legal and financial capacities and the commercial and technical abilities to undertake the relevant procurement".

In the original GPA, this condition was included in broader terms.¹²⁴ Article VIII(b) GPA 1994 stated that "any conditions for participation in tendering procedures shall be limited to those which are essential to ensure the firm's capability to fulfil the contract in question". However, even though the conditions for participation in tendering procedures imposed on suppliers appear to be defined in more restrictive terms in the revised text, it remains the case today that contracting authorities may find essential the ability to supply products that respect certain social criteria.¹²⁵ Nothing in the text of Art. VIII(b) GPA (1994) and Art. VIII.1 of the revised GPA seems to prohibit governments from pursuing these social policies through their procurement schemes, provided the notions of a firm's "capability" (the 1994 version) or "legal and technical capacity" (the revised text) are read in the light of the current practice of governments.¹²⁶ With respect to the award criteria, Article XV.5 of the revised GPA specifies that procurers may decide to award the contract either to the "most advantageous" tender, or to the tender with the lowest price, "where price is the sole criterion". This clearly shows that non-economic considerations may legitimately play a role in the selection: the procuring entity may consider the value of the tender to be influenced by social and ethical concerns, and the term "most advantageous" must be construed to allow the inclusion of award criteria of non-economic nature.

Finally, ethical procurement schemes may be justified by incorporating ethical considerations as conditions of the contract.¹²⁷ For instance, a condition may be stipulated requiring compliance with labour rights or certain environmental conditions for the duration of the contract, or for the production of goods or provision of services required for the fulfilment of the contract. It has sometimes been suggested that this might constitute a circumvention of the obligations stipulated under the GPA.¹²⁸ However, the GPA should be read as restricting the discretion of governments only with respect to the technical specifications, supplier qualifications and award criteria, and not with respect to the conditions of the contract, for the reason that such conditions really pertain to the purpose of the contract.¹²⁹ Indeed, it cannot lightly be assumed that the parties to the GPA intended to give up this power, because many of them, such as the US and the EU, had in place extremely politically sensitive procurement plans in operation at the time of contracting, including the highly symbolic Executive Order 11246 (1965), by which the US has instituted affirmative action policies in employment for government contracts.

There is, however, one potential restriction imposed by the GPA for the WTO Members who have entered into this Agreement: it concerns the possibility of imposing a conditions related to local sourcing. Indeed, reference to the domiciliation of the supplier (or, in the case of a food purchasing programme, to where the food is grown or processed) may be seen as clearly discriminatory against foreign suppliers. However, it should be recalled that many local public authorities will rely on public tenders for sums that fall below the threshold beyond which the GPA will apply.¹³⁰ Moreover, whenever a programme is large, it can be broken down into smaller volumes in order to favour offers of smaller producers, and allow them to submit a proposal only for one product or for a small volume. This, for instance, is what the French Ministry of Agriculture recommends, in a practical guide addressed to local public authorities in order to encourage them to favour local and high-quality procurement for organisations such as schools, hospitals, or administrations.¹³¹

APPENDIX 4. *The use of non-economic considerations in public purchasing in the European Union*

Recent legislative instruments in the European Union include references to the possibility for public authorities to include environmental conditions in public tenders. Such references were initially included two directives concerning public procurement that were adopted in 2004.¹³² Beyond environmental conditions however, uncertainties remained after those directives were adopted as to how much freedom the national authorities could be allowed in including non-economic conditions either as criteria for the qualification of tenderers, or as criteria for the awardance of contracts. The debate was relaunched in 2008, after the Dutch province of Groningen issued a public tender for the supply and management of automatic coffee machines. The tender stipulated, *inter alia*, that the coffee had to be produced by smallholders, who would be paid a minimum price, alongside a premium price for social development. The tender referred to products bearing the EKO and Max Havelaar labels. Douwe Egberts protested that these requirements effectively excluded them from the tender, because their coffee, certified by the UTZ label, did not fulfil all the stipulated conditions. The Dutch court found in favor of the province. It took the view that Groningen was free to pursue ethical and sustainability goals under both Dutch and EU public procurement law,¹³³ in particular as specified in the 2004 Directive on public contracts.¹³⁴ It also noted that the conditions were laid down in a manner that was transparent and open.¹³⁵ Finally, there were 20 other producers in the Netherlands who could have complied with those conditions, meaning that it did not restrict the field to just one producer.¹³⁶ In other words, social and ethical linkages did not appear to violate the fundamental principles of public procurement.¹³⁷

The European Commission appeared to disagree with this assessment. In 2010, it filed infringement proceedings against the Netherlands. In a judgment of 10 May 2012 however, the Court of Justice of the European Union expressly confirmed that the inclusion of fair trade and organic agriculture criteria in public procurement was compatible with the requirements of EU law. The Court limited its criticism to the use of labels to achieve that end, ruling that the underlying criteria were not sufficiently precise and objective.¹³⁸

The new EU Directive on public procurements (2014/24/EU) adopted on 26 February 2014 (repealing Directive 2004/18/EC)¹³⁹ does not merely confirm this case-law; it was in fact specifically designed to allow greater use of public procurements in supporting other policy objectives of the Europe 2020 agenda.¹⁴⁰ Indeed Directive 2014/24/EU aims to be a positive instrument tailored to allow greater use of public procurements in the support of a set of “common societal goals such as protection of the environment, higher resource and energy efficiency, combating climate change, promoting innovation, employment and social inclusion and ensuring the best possible conditions for the provision of high quality social services”.¹⁴¹ It does so in two ways: (i) beyond the setting of thresholds defining its scope of application which *de facto* favors smaller-size suppliers, it contains measures aimed at facilitating the access of small-and-medium size enterprises to public procurements — such as the possibility for public authorities to divide up large contracts into lots of a size more manageable by such suppliers —; and (ii) it widens the range of criteria that may be included both in defining the object of the procurement and in awarding the contract. Public authorities are specifically authorized to adopt a life-cycle approach to the product, service or work object of the procurement, and include environmental externalities in the analysis of the most “economically advantageous” tender.¹⁴²

(i) Directive 2014/24/EU recognizes the “strong trend emerging across Union public procurement markets towards the aggregation of demand by public purchasers, with a view to obtaining economies of scale, including lower prices and transaction costs”,¹⁴³ but warns on the negative effects of such practices for small and medium-size suppliers. Public procurers are therefore encouraged “to divide large contracts into lots”¹⁴⁴ on a quantitative or qualitative basis, so that contracts can better correspond to the capacities of small-scale enterprises.¹⁴⁵ A procedure is also prescribed to allow the awarding of lots to different producers or service providers and therefore ensure the effectiveness of the system.¹⁴⁶

(ii) The criteria used to design the procurement and to award the contract have been extended to allow for the inclusion of environmental, social and labour requirements. Quite notably “characteristics may (...) refer to the specific process or method of production or provision of the requested works, supplies or services or to a specific process for another stage of its life cycle even where such factors do not form part of their material substance provided that they are linked to the subject-matter of the contract and proportionate to its value and its objectives”.¹⁴⁷ The notion of “life-cycle” introduced refers to the steps “from raw material acquisition or generation of resources to disposal, clearance and end of service or utilisation”.¹⁴⁸ The same variety of criteria may also be used to assess the tenders and award the contracts.¹⁴⁹ Remarkably “qualitative, environmental and/or social aspects”¹⁵⁰ including environmental externalities may be taken into account when assessing which of the tenders is most “economically advantageous”.¹⁵¹

ENDNOTES AND REFERENCES

- 1 For a synthesis, see Olivier De Schutter, "The Specter of Productivism and Food Democracy", *Wisconsin Law Review*, vol. (2014) , pp. 199-233; as well as Olivier De Schutter, "The Right to Adequate Nutrition", *Development*, 57(2): 147-154 (2014). For an analysis focused on agronomic alternatives to the productivist approach, see Olivier De Schutter, "Agroecology: A Solution to the Crises of Food Systems and Climate Change", *UNCTAD Trade and Environment Review* 2013, pp. 34-39.
- 2 Together, field-level practices represent approximately 15 per cent of total man-made greenhouse gas emissions, in the form of nitrous oxide (N₂O) from the use of organic and inorganic nitrogen fertilizers, methane (CH₄) from flooded rice fields and livestock, and carbon dioxide (CO₂) from the loss of soil organic carbon in croplands and, due to intensified grazing, on pastures. In addition, the production of fertilizers, herbicides and pesticides, the tillage, irrigation and fertilization, and the transport, packaging and conservation of food require considerable amounts of energy, resulting in an additional 15 to 17 per cent of total man-made greenhouse gas emissions attributable to food systems. See High-level Panel of Experts on Food Security and Nutrition, *Food Security and Climate Change*, HLPE Report No. 3, Committee on World Food Security, Rome, June 2012. This is confirmed by more recent estimates: see Sonja J. Vermeulen, Bruce M. Campbell, and John S.I. Ingram, "Climate Change and Food Systems", *Ann. Rev. Environ. Resour.*, vol. 37(2012), pp. 195-222.
- 3 The First FAO Report on the *State of the World's Plant Genetic Resources*, based on more than 150 country reports, prepared for the International Technical Conference on Plant Genetic Resources held in Leipzig, Germany, 17-23 June 1996, concluded that 'the main cause of genetic erosion in crops (...) is the replacement of local varieties by improved or exotic varieties and species. As old varieties in farmers' fields are replaced by newer ones, genetic erosion frequently occurs because the genes and gene complexes found in the diverse farmers' varieties are not contained in toto in the modern variety. In addition, the sheer number of varieties is often reduced when commercial varieties are introduced into traditional farming systems' (Food and Agriculture Organization of the United Nations, *The State of the World's Plant Genetic Resources for Food and Agriculture* (FAO, Rome, 1997), at 33). This was confirmed in the updated report, published in 2010 (*Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (FAO, Rome, 2010), at 15-16).
- 4 H.W. Paerl and J. Huisman, 'Climate change: links to global expansion of harmful cyanobacteria', *Water Research* 46, 1349-63 (2012); Michael F. Chislock, Enrique Doster, Rachel A. Zitomer, and Alan E. Wilson, 'Eutrophication: Causes, Consequences, and Controls in Aquatic Ecosystems. *Nature Education Knowledge* 4(4)(2013):10.
- 5 See Davis D.R., Epp M.D and Riordan, H.D., 'Changes in USDA Food Composition Data for 43 Garden Crops, 1950 to 1999', *Journal of the American College of Nutrition*, 23(6) (2004): 669-682.
- 6 OECD, *Government at a Glance* 2011, 2011, OECD Publishing, p. 148. Note: in 2002, the OECD had a different and greater estimate: public procurement (expressed as percentage of 1998 GDP data) was estimated to represent approximately 20% of the GDP in OECD countries (US\$ 4 733 billion) and 14,5% in non-member countries (US\$ 816 billion). The U.N. Department of Economic and Social Affairs estimate for the size of public procurement is between 6 to 10% of countries' GDP. See: Denis Audet, *Government Procurement: A Synthesis Report*, OECD Journal on Budgeting – Vol. 2, No. 3, p. 150. ; U.N. Department of Economic and Social Affairs, *Public Procurement as a tool for promoting more Sustainable Consumption and Production patterns*, Sustainable Development Innovation Briefs, Issue 5 (August 2008), p 1.

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- 7 The public catering sector in the UK represented some £2 billion per year in 2008 (approx. US \$3 billion or €3,16 billion). See Kevin Morgan, Greening the Realm: Sustainable Food Chains and the Public Plate, *Regional Studies*, (2008) vol. 42:9, p. 1246 (the figures use a conversion rate to dollars and euros according OANDA exchange rates in 2001).
- 8 U.N. Department of Economic and Social Affairs, Public Procurement as a tool for promoting more sustainable consumption and production patterns, Sustainable Development Innovation Briefs, Issue 5 (August 2008), p. 1.
- 9 Ban Ki-moon, Foreword, *In UNOPS, Procurement and the Millennium Development Goals*, Supplement to the 2010 Annual Statistical Report on United Nations Procurement, 2011, New York, p. i (conversion rate to dollars and euros according OANDA exchange rates in 2010).
- 10 A/RES/60/1, para 34 (adopted by the High-Level Plenary Meeting of the 60th session of the General Assembly).
- 11 World Food Programme, Home-grown School Feeding. A framework to link school feeding with local agricultural production, Rome (without date), p. 9.
- 12 National Fund for Development of Education (FNDE), Programa Nacional de Alimentação Escolar (PNAE), II Encontro Nacional de Gestores da Rede de Equipamentos e Serviços de Alimentação e Nutrição (slide 3), Available at <http://www.slideshare.net/comredesan/pnae-programa-nacional-de-alimentao-escolar>
- 13 Section 4202 of the Agricultural Act of 2014 (P.L. 113-79), otherwise known as the Farm Bill, amended Section 6 of the Richard B. Russell National School Lunch Act (42 U.S.C. 1755(f)) to provide for a pilot project for the procurement of unprocessed fruits and vegetables in not more than eight States receiving funds under Section 6.
- 14 Avani Kapur and Anirvan Chowdhury, Budget Briefs: TPDS, GOI 2011-12, Accountability Initiative, Centre for Policy Research, pp. 1-2.
- 15 For instance, in the Zuni Indian Reservation (located primarily in McKinley and Cibola counties in western New Mexico, about 150 miles west of Albuquerque), the Zuni Youth Enrichment Project includes support for a school garden at Twin Buttes High School, as well as in the two elementary schools that are included in the reservation; moreover, a community garden is planned to be established adjacent to the newly established Zuni Youth Complex. These projects are supported by the Christensen Fund. Vegetable gardens have also occasionally been established for hospital residents. For instance, the Red Willow Centre for Health and Healing established in Montana created garden plots for the residents, again with support from the Christensen Fund.
- 16 For instance, social cafés sourcing local foods and allowing low-income families to have access to adequate diets with the support of the community (for instance, by individual community members supporting the café through their unpaid work) have been developing in recent years: in Sells, Arizona, TOCA (Tohono O'odham Community Action, established to support the Tohono O'odham Nation) runs a café (the "Desert Rain" café) and has started a food service company both featuring traditional native foods, with the support of the Christensen Fund.
- 17 See in particular Clare Hinrichs, 'The practice and policies of food system localization', *Journal of Rural Studies*, vol. 19(1) (2003): 33-45; N. Hassanein, 'Practicing food democracy: a pragmatic politics of transformation', *Journal of Rural Studies*, vol. 19(1) (2003): 77-86; E. Melanie DuPuis and David Goodman, 'Should we go 'home' to eat?: towards a reflexive politics of localism', *Journal of Rural Studies*, vol. 21 (2005): 359-371. For instance, the 2009 Baltimore Sustainability Plan referred to in table 1 recommends to "support the use of local business transactions to curb the loss of consumer, business, and government dollars that go to purchasing products and services from companies outside our own community".

1 INSTITUTIONAL FOOD PURCHASING AS A TOOL FOR FOOD SYSTEMS REFORM

- 18 Hans-Jürgen Schmidt, "Carbon Footprinting, Labelling and Life Cycle Assessment", *The International Journal of Life Cycle Assessment*, vol. 14(S1) (2009), pp. 6-9. See also, noting that "food miles" are often a poor indicator of environmental performance, the report by the United Kingdom's Department for Environment, Food and Rural Affairs (Defra), *The Validity of Food Miles as an Indicator of Sustainable Development*, July 2005 (see <http://archive.defra.gov.uk/evidence/economics/foodfarm/reports/documents/foodmile.pdf>, last consulted on Feb. 15th, 2015).
- 19 WHO, *Global Status Report on Non-Communicable Diseases 2010* (Geneva: World Health Organization, 2011). See further C.A. Roberto et al., "Patchy progress on obesity prevention: emerging examples, entrenched barriers, and new thinking", *The Lancet*, February 2015, 5-14.
- 20 James Sumberg and Rachel Sabates-Wheeler, Linking agricultural development to school feeding in sub-Saharan Africa: Theoretical perspectives, *Food Policy* 36 (2011), p. 342. Note: the term 'demand-assisted growth' was suggested by Tendler and Amorim. See: J. Tendler and M.A. Amorim, Small firms and their helpers: lessons on demand. *World Development*, vol. 24 (3) (1996), 407-426.
- 21 World Food Programme, P4P Purchase for Progress : A Primer. P4P Coordination Unit Publication, World Food Programme, Rome, 2012, pp. 7-8; and World Food Programme, Home-Grown School Feeding, cited above, pp. 19-20.
- 22 Kevin Morgan and Roberta Sonnino, The School Food Revolution: Public food and the challenge of sustainable development, Earthscan, London/Sterling, 2008.; Kevin Morgan and Roberta Sonnino, Rethinking School Food: The Power of the Public Plate, In: 2010 State of the World - Transforming Cultures : From Consumerism to Sustainability, The WorldWatch Institute, 2011, pp. 69-74.
- 23 A study estimated that for 2001, such costs unaccounted for in the price of food for the end consumer was 32 billion USD in the United States, equivalent to one third of total agricultural value. In other terms, were consumers to pay the "real price" of food, they would have to pay about 33 % more ; what they do not pay in the current system is in fact passed on to the taxpayer, as public budgets shall have to compensate for the destruction of the ecosystems or the excess health care costs that improved agricultural practices and better nutrition might have saved. See Jules Pretty et al., 'Policy Challenges and Priorities for Internalizing the Externalities of Modern Agriculture', *Journal of Environmental Planning and Management*, vol. 44(2) (2001): 263-283. Similarly, a study of the New Economics Foundation took as an indicator of the fact that the food system in the United Kingdom was failing the fact that "including adverse environmental impacts, the cost of obesity and subsidies paid through the Common Agricultural Policy (CAP), ... the total external cost of the UK food system [can be estimated] to be between £11 billion and £26 billion. This means that our effective food bill is at least 12-28% greater than the price we pay at the till" (New Economics Foundation, *Urgent recall. Our food system under review*, November 2014, p. 5).
- 24 A.U. Ahmed and M. Sharma, Food-for-education programs with locally produced food: Effects on farmers and consumers in Sub-Saharan Africa. Washington DC, International Food Policy Research Institute, 2004. Cited in: World Food Programme, Home-Grown School Feeding: A Framework to Link School Feeding with Local Agricultural Production. Rome: WFP, 2008, p. 21.
- 25 New Economics Foundation, The Benefits of Procuring School Meals through the Food For Life Partnership: an economic analysis, pp. 26-30 (see also pp. 9-11 on the Social Return on Investment methodology, and pp. 25-30 on the displacements effects and the need to take into account social and environmental benefits).
- 26 O. Lancaster and Durie, The Social Return on Investment of Food for Life School Meals in East Ayrshire, Edinburgh, Footprint Consulting Limited, 2008. Cited in: Sonnino, Escaping the Local Trap, cited above, at p. 38.

1 INSTITUTIONAL FOOD PURCHASING AS A TOOL FOR FOOD SYSTEMS REFORM

- 27 Steve Davies, *School Meals, Markets and Quality*, Unison, 2005; Steve Davies, *Hospital Contract Cleaning and Infection Control*, Unison, 2005.
- 28 Kevin Morgan, *The Coming Crisis of School Food: From Sustainability to Austerity?* *Welsh Economic Review*, vol. 22, 2011, p. 32-35.
- 29 Morgan, *Greening the Realm*: cited above, at p. 1246.
- 30 Sarah W. Adelman, Daniel O. Gilligan, Kim Lehrer, *How effective are food for education programs? A critical assessment of the evidence from developing countries*. International Food Policy Research Institute (IFPRI), *Food Policy Review* 9 (2008), pp. 1-85.
- 31 Michèle Belot and Joachim James, "Healthy School Meals and Educational Achievements", *Journal of Health Economics*, vol. 30 (3) (2011), 489-504.
- 32 James Sumberg and Rachel Sabates-Wheeler, *Linking agricultural development to school feeding in sub-Saharan Africa: Theoretical perspectives*, *Food Policy* 36 (2011), p. 343.
- 33 World Food Programme, 2008. *Home-grown School Feeding: A Framework to Link School Feeding with Local Agricultural Production*. Rome: WFP.
- 34 <http://hgsf-global.org/>
- 35 Note: Strategic Objective 5 of the 2008-2013 Strategic Plan focuses on "using WFP's purchasing power to support the sustainable development of food and nutrition security systems and transform food and nutrition assistance into a productive investment in local communities". See World Food Programme, *P4P Purchase for Progress: A Primer*. P4P Coordination Unit Publication, World Food Programme, Rome, 2012, p. 4.
- 36 Author's calculations.
- 37 WFP and KIT, *Experiences of P4P capacity building efforts and procurement from farmers' organizations*. World Food Programme and Royal Tropical Institute (KIT), 2012, p. 27.
- 38 World Food Programme, *Home-grown school feeding*, cited above, at p. 45.
- 39 World Food Programme, *The evidence so far - P4P annual consultation*, Rome, 29-30 January 2013, p. 22.
- 40 On gender, see: Report presented by the Special Rapporteur on the right to food, *Women's rights and the right to food*, Report presented to the Human Rights Council at the twenty-second session of the Human Rights Council, UN doc. A/HRC/22/50, 24 December 2012.
- 41 World Food Programme, *P4P Purchase for Progress: A Primer*, cited above, at p. 9.
- 42 Darana Souza, *A Multidimensional Approach to Food Security: PAA Africa, Focus on Africa: the Role of South-South Cooperation in Inclusive and Sustainable Agricultural Development, Poverty in focus n°24* (June 2012). International Policy Centre for Inclusive Growth Poverty, UNDP, p. 16.
- 43 Kei Otsuki, *Sustainable partnerships for a green economy: A case study of public procurement for home-grown school feeding*. *Natural Resources Forum*, 35 (2011), p. 218.
- 44 Morgan and Sonnino, *Rethinking School Food*, cited above, at p. 72.
- 45 *Ibid.*, pp. 73-74.
- 46 World Food Programme, *P4P Purchase for Progress: A Primer*, cited above, at pp. 20-21.
- 47 *Ibid.*, p. 21, 30.

- 48 Government of India, Foodgrain Bulletin for the Month of November/ December 2012, Department of Food & Public Distribution, p.3. (Note: the figures are totals for Kharif Marketing Season (KMS) and Rabi Marketing Season (RMS). Available on <http://dfpd.nic.in/?q=node/1058>). The scheme was criticized in recent years because of its large contributions to government budget deficits, economic inefficiency and poor targeting: Vijay Paul Sharma, Food Subsidy in India: Trends, Causes and Policy Reform Options, Indian Institute of Management Ahmedabad, W.P. No.2012-08-02 (August 2012), 41 pp.
- 49 Danuta Chmielewska and Darana Souza, Offering Market Alternatives for Smallholder Farmers in Food Security Initiatives: Lessons from the Brazilian Food Acquisition Programme, IPC-IG Working Paper 64, International Policy Centre for Inclusive Growth, Brasilia, June 2010, p. 2; and Souza and Chmielewska, Public Support to Food Security in India, Brazil and South Africa, cited above, at p. 26.
- 50 Under this scheme, state governments undertake procurement of rice and wheat on behalf of the federal government, and also stores and distributes these food grains. The central government reimburses the entire expenditure incurred by the state governments on the procurement operations.
- 51 An Act to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto (National Food Security Act), *Official Gazette*, 10 September 2013.
- 52 Souza and Chmielewska, Public Support to Food Security in India, Brazil and South Africa, cited above, at p. 5, 16.
- 53 World Food Programme, P4P Purchase for Progress: A Primer, cited above, at p. 21-42.
- 54 World Food Programme, P4P Purchase for Progress: A Primer, cited above, at p. 26. Note: according to the WFP, response and mitigation strategies might include: (i) crop and weather insurance schemes/funds, and (ii) special provisions in credit and partnership agreements allowing farmers to carry over credit obligations to successive seasons, perhaps combined with some form.
- 55 Committee on Economic, Social and Cultural Rights, general comment No. 18 (2005) on the right to work (art. 6), para. 7. The Ethical Trading Initiative Base Code refers to a “living wage” as one that is “enough to meet basic needs and to provide some discretionary income” (art. 5.1).
- 56 Radhika Lal, Ryan L. Nehring and Ben McKay, Public Policies for Inclusive and Sustainable Agriculture: an Emerging Agenda for South-South Cooperation?, *Poverty in focus* n°24 (June 2012). International Policy Centre for Inclusive Growth Poverty, UNDP, pp 14.
- 57 Report presented by the Special Rapporteur on the right to food, Towards more equitable value chains: alternative business models in support of the right to food, Report presented the United Nations General Assembly at the 66th Session of the United Nations General Assembly, UN doc. A/66/262, para. 29.
- 58 On the role of states in protecting the right to food of workers and farmers involved in agri-food chains, see: Report presented by the Special rapporteur on the right to food to the Human Rights Council at the 13th session of the Human Rights Council, Agribusiness and the right to food, UN doc. A/HRC/13/33, 22 December 2009.
- 59 Ley 30/2007 de Contratos del Sector Público of 30 October 2007. Boletín Oficial del Estado n. 261 (31 October 2007)
- 60 Serhi Corbalan, Fair Trade Advocacy Office, personal communication, 27 January 2011.

- 61 An Act to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto (National Food Security Act), *Official Gazette*, 10 September 2013.
- 62 Otsuki, Sustainable partnerships for a green economy, cited above, at p. 217.
- 63 Scottish Executive, Expert Panel (2002) *Hungry for Success. A Whole School Approach to School Meals in Scotland*, Final Report of the Expert Panel on School Meals, November 2002.; Roberta Sonnino, Escaping the Local Trap: Insights on Re-localization from *Journal of Environmental Policy & Planning*, 12:1 (2010), pp. 29-30. Note: conversion rate to dollars and euros according OANDA exchange rates in mid-2005.
- 64 Morgan and Sonnino, Rethinking School Food, cited above, at pp 72. See also: Roberta Sonnino, Quality food, public procurement, and sustainable development: the school meal revolution in Rome. *Environment and Planning A* 41 (2), 2009, pp. 425-440; Sonnino, Escaping the Local Trap, cited above, at pp. 23-40.
- 65 Morgan and Sonnino, Rethinking School Food, cited above, at pp. 73-74.
- 66 Kevin Morgan, Greening the Realm: Sustainable Food Chains and the Public Plate, *Regional Studies*, 42:9, 2008, p. 1243.
- 67 Report presented by the Special Rapporteur on the right to food to the Human Rights Council at the 16th session of the Human Rights Council, Agroecology and the Right to Food, UN doc. A/HRC/16/49, 20 December 2010, paras 42 and 44.
- 68 See above, note 30.
- 69 Kevin Morgan and Roberta Sonnino, Empowering consumers: The creative procurement of school meals in Italy and the UK, *International Journal of Consumer Studies* 31 (2006), pp.19-25.
- 70 Morgan and Sonnino, Rethinking School Food, cited above, at pp. 72.
- 71 Kei Otsuki, Home-grown food in schools for a green economy, United Nations University (UNU), 22 November 2011. Available at <http://unu.edu/articles/development-governance/home-grown-food-in-schools-for-a-green-economy> (Accessed 8 March 2012)
- 72 Morgan and Sonnino, Rethinking School Food, cited above, at p. 70.
- 73 Ontario Ministry of Agriculture, Food & Rural Affairs, Friends of the Greenbelt Foundation and Broader Public Sector Investment Fund, Ontario's Local Food Champions 2012 : Cultivating Change in the Broader Public Sector, pp. 6-7.
- 74 Lal et al., Public Policies for Inclusive and Sustainable Agriculture, cited above, at p. 14.
- 75 Programa de Aquisição de Alimentos, Official Budget 2012-2015, Appendix I – thematic programmes, p. 336.
- 76 Morgan and Sonnino, Rethinking School Food, cited above, at p. 73-74.
- 77 Ibid., at p. 72.
- 78 U.N. Department of Economic and Social Affairs, Public Procurement as a tool for promoting more sustainable consumption and production patterns, cited above, at p. 6.
- 79 Ch. Eaton & A. Shepherd, Contract Farming: partnerships for growth, Agricultural Services Bulletin No. 145, FAO, Rome (2001), at 2.

- 80 M. Brüntrup & R. Peltzer, "Outgrowers – a key to the development of rural areas in Sub-Saharan Africa and to poverty reduction," Report of the DEG / DIE Workshop on August 18, 2006 (Jan. 2007), at 2; C. da Silva, "The Growing Role of Contract Farming in Agri-Food Systems Development: Drivers, Theory and Practice," Agricultural Management, Marketing and Finance Service, FAO (2005), at 11.
- 81 For an exhaustive analysis, see the report presented by the Special Rapporteur on the right to food to the 66th Session of the United Nations General Assembly, Towards more equitable value chains: alternative business models in support of the right to food, UN doc. A/66/262, 4 August 2011, para 25-32.
- 82 M. Brüntrup & R. Peltzer, "Outgrowers – a key to the development of rural areas in Sub-Saharan Africa and to poverty reduction," Report of the DEG / DIE Workshop on August 18, 2006 (Jan. 2007), at 43.
- 83 C. da Silva, "The Growing Role of Contract Farming in Agri-Food Systems Development: Drivers, Theory and Practice," cited above, at 17.
- 84 *State of Food Insecurity 2011* (SOFI 2011), FAO, Rome, 2011, p. 13 (referring in particular to M. Maertens & J. Swinnen, 'Are modern supply chains bearers of gender inequality?', ILO-FAO workshop "Gender Dimension of Rural Employment", 30 March–3 April 2009, Rome).
- 85 SOFI 2011, p. 13. See also J. Behrman et al., *The Gender Implications of Large-Scale Land Deals* 6 (IFPRI Discussion Paper No. 01056, 2011), at 11.
- 86 See Man-Kwun Chan, *Improving Opportunities for Women in Smallholder-based Supply Chains*, for the Bill & Melinda Gates Foundation, 2010 ; K. Schneider and M.K. Gugerty, "Gender and contract farming in Sub-Saharan Africa: Literature Review", Evans School of Public Affairs, University of Washington, 2010.
- 87 C. Dolan, Gender and Witchcraft in Agrarian Transition: The Case of Kenyan Horticulture, 33 Dev. and Change 659, 671 (2002).
- 88 Man-Kwun Chan, *Improving Opportunities for Women in Smallholder-based Supply Chains*, for the Bill & Melinda Gates Foundation, 2010, at p. 23.
- 89 M. Walsh, Women in Food Aid Interventions: Impacts and Issues, Time for Change: Food Aid and Development, WFP, Rome, 23–24 October 1998.
- 90 Otsuki, Home-grown food in schools for a green economy (website), cited above.
- 91 Otsuki, Sustainable partnerships for a green economy, cited above, at p. 214.
- 92 Ibid., at p. 218.
- 93 Morgan and Sonnino, Empowering consumers, cited above, at pp. 19-25; and Sonnino, Escaping the local trap, cited above, at pp. 23-40.
- 94 For a review of these different means of encouraging food democracy, see Jill Carlson and M. Jahi Chappell, *Deepening Food Democracy*, Institute for Agriculture and Trade Policy (IATP), January 2015.
- 95 World Food Programme, Home-grown School Feeding, cited above, at p. 64.
- 96 See Fikret Berkes, 'Evolution of co-management: Role of knowledge generation, bridging organizations and social learning', *Journal of Environmental Management*, vol. 90 (2009): 1692-1702.
- 97 David A. Cleveland, et al., "Local food hubs for alternative food systems: A case study from Santa Barbara County, California", *Journal of Rural Studies*, 35(2014): 26-39.
- 98 See <http://www.epiceries-solidaires.org/news/uniterres-des-circuits-courts-dans-le-reseau-des-epiceries-solidaires> (last consulted on 15 February 2015).

- 99 See <http://www.epiceries-solidaires.org/> (last consulted on 15 February 2015).
- 100 See <http://www.plunkett.co.uk/whatwedo/rcs/ruralcommunityshops.cfm> (describing the work of the Plunkett Foundation in this regard) and <http://www.communityshops.coop/> (both last consulted on 15 February 2015).
- 101 In 1994, there were 27 community shops in the whole of Great Britain; the increase in the number of shops was 6% in 2013 alone. See the report *A better form of business: community-owned village shops* (Plunkett Foundation, 2014).
- 102 The 5-years survival rate of community shops is 99%, compared with 45% for the average UK business (*A better form of business: community-owned village shops*, cited above, p. 9).
- 103 Id., p. 19.
- 104 See <http://www.farmfreshri.org/about/about.php> (last consulted on 15 February 2015).
- 105 See <http://www.kendall.org/stories/food-solutions-new-england> (last consulted on 15 February 2015).
- 106 See <http://www.fairfoodnetwork.org/what-we-do/projects/strengthening-detroit-voices> (last consulted on 15 February 2015).
- 107 As regards the project in Lorient, this is also supported by the EU under the FEADER programme (Fonds européen agricole pour le développement rural): through this Fund, the LEADER project supported Vannes (a grouping of local collectivities in Brittany) for an amount of 1,948,094 euros for 2009-2013.
- 108 The Growing Food Connections initiative has recently established a new database to collect examples of local policies in support of community food systems: see <http://growingfoodconnections.org/tools-resources/policy-database/> (last consulted on Feb. 15th, 2015). The database includes a range of examples of local food procurement policies.
- 109 See <http://www.baltimoresustainability.org/sites/baltimoresustainability.org/files/Baltimore%20Sustainability%20Plan%20FINAL.pdf> (last consulted on Feb. 20th, 2015).
- 110 See <http://www.sfgov3.org/Modules/ShowDocument.aspx?documentid=503> (last consulted on Feb. 20th, 2015).
- 111 See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/365960/20141013_Hospital_Food_Panel_Report_Complete_final_amended_for_website_oct_14_with_links.pdf (last consulted on Feb. 20th, 2015).
- 112 Miet Maertens and Johan F. Swinnen, 'Trade, Standards and Poverty : Evidence from Senegal', *World Development*, 37(1) (2009): 161-178.
- 113 New Agriculturalist online. 2003. Exacting standards : see <http://www.new-ag.info/03-3/focuson/focuson1.html>.
- 114 The Euro-Retailer Produce Working Group launched the European Retailers' Protocol for Good Agricultural Practice (EurepGAP) in 1997, covering the process from farm inputs to the farmgate. This certification scheme evolved in 2007 into GLOBALG.A.P. It now includes an estimated 120,000 producers spread over more than 100 countries, although most of them are still in Europe.
- 115 IIED (International Institute for Environment and Development) and NRI (Natural Resources Institute), *Costs and Benefits of GLOBALGAP compliance for smallholders: synthesised findings* (2008).
- 116 Boro de Batisti A, MacGregor J, Graffham A (eds), *Standard bearers. Horticultural exports and private standards in Africa* (International Institute for the Environment and Development, 2009).

- 117 Catherine Dolan and John Humphrey, 'Changing Governance Patterns in the Trade in Fresh Vegetables between Africa and the United Kingdom', *Globalisation & Poverty*, 2004, 17 – 18
- 118 On 15 December 2011, the Parties to the current GPA reached a political agreement on the outcomes of the re-negotiations of the 1994 Agreement, which was launched already in 1997. This was confirmed on 30 March 2012 by the formal adoption of the Decision on the Outcomes of the Negotiations under Article XXIV:7 of the Agreement on Government Procurement (GPA/113). The revised WTO Agreement on Government Procurement entered into force on 6 April 2014.
- 119 The countries parties to the current GPA are the 27 member States of the European Union, Armenia, Canada, China (and Hong Kong), Iceland, Israel, Japan, Korea, Liechtenstein, the Netherlands with respect to Aruba, Norway, Singapore, Switzerland, Chinese Taipei, and the United States.
- 120 Specific thresholds have been negotiated by each party and range between 130,000 SDR (Special Drawing Rights) and 15 million SDR (between approximately 202,800 USD and 23.4 million USD at the exchange rate at the time of writing).
- 121 Indeed, the revised GPA defines a "technical specification" as a requirement that "lays down the characteristics of goods or services to be procured, including quality, performance, safety and dimensions, or the processes and methods for their production or provision" (Art. I, (u), a)), clearly allowing such considerations related to production or process methods to play a role in the awardance of public contracts.
- 122 In addition, and quite understandably, they may not specify particular brand names, producers or suppliers, except where there is no other intelligible way of describing the procurement requirements and words such as "or equivalent" are inserted appropriately in the tender.
- 123 Article IV.1 of the revised GPA.
- 124 For a comparison between these formulations, see Arie Reich, "The New Text of the Agreement on government Procurement: An Analysis and Assessment", *Journal of International Economic Law*, vol. 12(4) (2009), pp. 989-1022.
- 125 Cristoph Spennemann, "The WTO Agreement on Government Procurement – A Means of Furtherance of Human Rights?", *Zeitschrift für Europarechtliche Studien*, vol. 4 (2001), pp. 43-95.
- 126 This is also supported by Article VIII.4 of the revised GPA, which lists grounds for exclusion of certain tenderers. The list is explicitly not limitative ("grounds such as..."), the key requirement here being one of transparency in order to avoid any arbitrariness or discrimination in the choice of suppliers.
- 127 Christopher McCrudden, *Buying Social Justice. Equality, Government Procurement, and Legal Change* (Oxford: Oxford University Press, 2007), pp. 488 – 491.
- 128 Sue Arrowsmith, "Public Procurement as an Instrument of Policy and the Impact of Market Liberalisation", *Law Quarterly Reports*, vol. 111 (1995), pp. 235-284, at p. 281. However, she has since resiled from this line of thought: see S. Arrowsmith, *Government Procurement in the WTO* (Kluwer Law International, 2003), p. 340 at fn. 49. She now argues that social policy linkages "that are non-discriminatory have only a limited effect in restricting access to markets, since an interested supplier can often adapt its practices for the contract – although it is true that this is not always possible..." Moreover, she acknowledges that objections to linkages as contract conditions based on concerns about transparency are "not convincing", that governments have a "legitimate concern not to be closely associated with practices of which they disapprove", and that "qualification conditions are the only really effective method for enforcing secondary conditions..." As such, there is "insufficient reason to preclude their use".

- 129 Bernard M. Hoekman and Pedros C. Mavroidis, "Basic Elements of the Agreement on Government Procurement", in B. Hoekman and P. Mavroidis (eds.), *Law and Public Policy in Public Purchasing: Studies in International Trade Policy* (University of Michigan Press, 1997), p. 134.
- 130 See above, note 135.
- 131 *Guide pratique: Favoriser l'approvisionnement local et de qualité en restauration collective*, Ministère de l'agriculture, de l'agroalimentaire et de la forêt, 3ième éd., November 2014, p. 64 ("L'allotissement très fin (produit par produit) peut permettre à une petite entreprise ou entreprise spécialisée de pouvoir répondre au marché ; mais il faut souligner également son rôle déterminant pour un approvisionnement de qualité ; en effet, le pouvoir adjudicateur va pouvoir sélectionner individuellement chaque produit « le mieux disant », et non un lot pour lequel il serait très satisfait pour certains produits et peu convaincu par d'autres. Autrement dit, allouer en regroupant des produits de même nature peut nuire à la qualité de l'approvisionnement, et tend à classer les offres seulement par rapport au prix").
- 132 Directive 2004/18/EC of the European Parliament and the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts (OJ L 134/114) (see article 53(1)(a)); and Directive 2004/17/EC of the European Parliament and the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (OJ L 134/1) (see article 55(1)(a)). The clarification brought about by the directives was especially welcome given the hesitations of the Court of Justice on this issue. In the *Wienstrom* case (Case C-448/01, *EVN AG and Wienstrom GmbH v Republik Österreich*, judgment of 4 December 2003), the Austrian authorities had launched a call for tenders specifying that bidders should supply electricity from renewable energy sources. Bidders had to prove that they had disposed of or would dispose of a minimum amount of electricity per year from renewable energy sources equivalent to the estimated annual consumption of the Austrian Federal Republic's offices. In addition however, the Austrian authorities chose to give an important weight (of 45%), in the decision to award the contract, to the ability of the bidder to supply electricity from renewable sources of energy in excess of the AFR's estimated requirements, i.e., beyond what the execution of the contract required. The Court took the view that "it is open to the contracting authority when choosing the most economically advantageous tender to choose the criteria on which it proposes to base the award of contract, provided that the purpose of those criteria is to identify the most economically advantageous tender and that they do not confer on the contracting authority an unrestricted freedom of choice as regards the award of the contract to a tenderer" (para. 37). Hence, whereas the Court found it acceptable to make use of ecological award criteria, even in the absence of an immediate economic benefit for the contracting authority, it would not be acceptable to use an award criterion which is based on the total amount of electricity from renewable sources which can be provided in excess of the amount required under the contract, since this is not linked to the subject-matter of the contract and could lead to unjustified discrimination against bidders who are fully able to meet the contract requirements. Award criteria — such appears to be the lesson from the case — must be related specifically to the subject-matter of the contract, and not to the general capacity of the economic operator.
- 133 *Douwe Egberts Coffee Systems Nederland B.V. v. Provincie Groningen* (2007), Voorzieningenrechter Rechtbank Groningen, 97093/KG ZA 07-320. at para. 4.4.
- 134 Directive 2004/18/EC, cited above.
- 135 Id. at para. 4.3.
- 136 Id. at para. 3.3.

- 137 See the similar case also brought by Douwe Egberts against the Dutch municipalities of Den Helder and Alkmaar, recently handed down by a court in Alkmaar, Netherlands on April 2010. *Douwe Egberts Coffee Systems Nederland B.V v Gemeente Den Helder & Gemeente Alkmaar* (2010), Voorzieningenrechter Rechtbank Alkmaar, 117231/KG ZA 10-44.
- 138 Case C-368/10, *European Commission v Kingdom of the Netherlands*, judgment of 10 May 2012. For more information on the inclusion of green, social and fair trade criteria into European tenders, see: European Fair Trade Association, *State of Play of Fair Trade Public Procurement in Europe*, September 2010, pp. 25-33; and ClientEarth, *Identifying Opportunities for Sustainable Public Procurement. Briefing No. 2: Horizontal Objectives in Public Procurement*, October 2011, pp. 8-11.
- 139 Directive 2014/24/EU of the European Parliament and the Council, of 26 February 2014 on public procurement and repealing Directive 2004/18/EC (OJ L 94 of 28.3.2014, p. 65).
- 140 See in particular Recital 2; and see, among others, ClientEarth, Providing an enabling legal framework for sustainable public procurement, Key points for the revised Directive, November 2012, 4 pp.; ClientEarth, The EU's commitment to sustainable development. Time to progress from Green Public Procurement to Sustainable Public Procurement?, February 2012, 7 pp.; ClientEarth, Identifying Opportunities for Sustainable Public Procurement. Briefing No. 2: Horizontal Objectives in Public Procurement, October 2011, 16 pp.
- 141 Proposal for a Directive of the European Parliament and of the Council on public procurement, COM(2011) 896 final, p. 2.
- 142 See Directive 2014/24/EU, Arts. 42 and 68.
- 143 Directive 2014/24/EU of the European Parliament and the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC, OJ L 94, 28.03.2014, p. 65 (Preamble, Recital 59).
- 144 Directive 2014/24/EU, Preamble, Recital 78.
- 145 See also Directive 2014/24/EU, Preamble, Recital 20: "For the purposes of estimating the value of a given procurement, (...) it should be allowed to base the estimation of the value on a subdivision of the procurement only where justified by objective reasons. For instance, it could be justified to estimate contract values at the level of a separate operational unit of the contracting authority, such as for instance schools or kindergartens, provided that the unit in question is independently responsible for its procurement. (...)".
- 146 See Directive 2014/24/EU, art. 46. According to paragraph 4, Member States may render obligatory for public authorities to divulgate the reasons for not dividing the contract into lots.
- 147 Directive 2014/24/EU, art. 42, §1, sub. 2. The lessons of the Douwe Egbert case regarding labels have been integrated in art. 43 of the Directive.
- 148 Directive 2014/24/EU, art. 2, §1, (20).
- 149 See Directive 2014/24/EU, art. 67-69.
- 150 Directive 2014/24/EU, art. 67, § 2.
- 151 See Directive 2014/24/EU, art. 68.
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DIET, CHRONIC DISEASE AND THE FOOD SYSTEM: MAKING THE LINKS, PUSHING FOR CHANGE

Corinna Hawkes, Ph.D.

Fellow, Centre for Food Policy, City University, London, United Kingdom
Advisor, Leverhulme Centre for Integrative Research into Agriculture and Health, London, United Kingdom

EXECUTIVE SUMMARY

This paper assesses the links between the policies and processes of the modern food system and the increasing prevalence of unhealthy eating and diet-related non-communicable diseases. It focuses on the nutritional aspects of diet. The residues of contaminants introduced during agricultural and food production (e.g. agrichemicals, antibiotics) also have health impacts, but are not dealt with here.

It is well established that diets high in vegetables, fruits, whole grains, pulses (beans), nuts and seeds, with only modest amounts of meat and dairy, promote health and well-being. In particular, they can help prevent non-communicable (chronic) diseases, such as heart disease, diabetes and some cancers, and their metabolic risk factors, such as obesity and elevated blood pressure. Yet unhealthy diets have become increasingly prevalent over recent decades. The shift towards unhealthy diets is a result of a wide range of factors, including changes in income and working patterns and learned preferences for energy-dense and/or sugary foods and drinks. It is also a function of the development of the modern food system, the subject of this paper.

Although there is still a diverse range of food systems across the globe, modern food systems have become increasingly dominant. Characterized by “long-chains” geared towards maximizing efficiency to reduce costs and increase productivity, they use intensive, industrial production practices and sophisticated storage, processing and marketing technologies. These systems have a greater orientation towards international trade and investment and the private sector, and involve higher post-farm activities, marketing and costs.

The development of modern food systems has been strongly influenced by specific processes, notably the technology and supply chain management practices. It has also been influenced by specific policies, including agricultural production policies, such as decisions about investments in agricultural research; policies on trade, markets and industry, such as free trade agreements; policies which influence consumer purchasing power, such as food price subsidies; and policies on food transformation and consumer demand, such as regulations on the labeling and marketing of food.

Although tracing the impact of food systems policies and processes on specific dietary outcomes is challenging, collectively, the evidence suggests that the development of modern food systems has increased the

supply and reduced the cost of calories from a smaller number of staples and oilseeds; reduced the costs of doing business by large scale private agribusiness and food companies; and in turn facilitated greater consumption of refined carbohydrates, meat, vegetable oils and processed foods.

Proposed solutions for addressing the health problems created by modern food systems include: incentivizing smallholder and community food production for local markets; encouraging agrobiodiversity for dietary diversity; maintaining traditional wetmarkets; improving the diversity and quality of food procured by the public sector; investing in research and supply chain management for the production and distribution of fruits, vegetables, legumes and other nutrient-dense foods; making changes in food processing; leveraging international trade; implementing policies to regulate the food industry, improve food environments and align fiscal incentives; and improving the governance of food systems at all levels.

Funders have an important role to play in supporting solutions to diet-related NCDs through the food system. They can:

- Create synergies between the food systems programs they already fund (e.g. on undernutrition and sustainability) and unhealthy eating and NCD goals, including aligning any investments they make in agricultural research towards healthier foods;
- Support specific food systems programs (e.g. school gardens), structures (e.g. to retail markets for healthy foods that serve the poor) and policies (e.g. on marketing to children);
- Invest in building capacity, including in international agencies to improve food system governance; in civil society to demand more effective policies to regulate the food industry and improve people's food environments; and in governments to design and implement smarter food policies and systems-approaches to unhealthy diets and to manage the health risks introduced through trade agreements; and
- Support research (e.g. to identify effective food system solutions that meet multiple food systems goals).

1 DIETS, NON-COMMUNICABLE (CHRONIC) DISEASES AND THEIR METABOLIC RISK FACTORS

- 1.1 Non-communicable diseases (NCDs) are medical conditions or diseases which are non-infectious between people. NCDs are often referred to as *chronic diseases* i.e. diseases that last for long periods of time and progress slowly. However, sometimes NCDs result in rapid deaths e.g. some types of cancer, while some chronic diseases of long duration, such as HIV/AIDS, are caused by transmittable infections. The term NCDs is therefore used throughout this paper. The leading diet-related NCDs by mortality and morbidity are cardiovascular

diseases, diabetes and some cancers; leading metabolic risk factors for these diseases include overweight/obesity, hypertension, elevated blood glucose and high cholesterol.

- 1.2 Scientific research has established that people's diets influence their risk of NCDs and associated metabolic risk factors. NCD risk is also influenced by contaminants found in food, such as agrichemicals, food additives, hormones and antibiotic residues. This paper focuses on the nutrition-related aspects of diet.
- 1.3 Consuming predominantly plant-based diets (i.e. diets high in vegetables, fruits, whole grains, pulses/beans, nuts and seeds, with only modest amounts of meat and dairy) reduces the risk of developing obesity, diabetes, cardiovascular diseases, and some forms of cancer.
- 1.4 Specific food groups are linked with NCD-risk. Fruits and vegetables contribute to preventing cardiovascular disease and are protective against some cancers. Red and processed meat raise the risk of colorectal cancer. Diets high in meat and dairy increase blood pressure. Diets high in energy-dense foods, refined carbohydrates and/or sugary drinks contribute to overweight/obesity.
- 1.5 Individual nutrients are also linked with NCD-risk. Saturated fat and trans fats increase blood cholesterol and cardiovascular risk. Higher sodium/salt intake is a major risk factor for elevated blood pressure and cardiovascular diseases, and probably stomach cancer. There is an ongoing scientific debate about whether sugar has specific properties that promote weight gain and diabetes above and beyond its contribution to excess energy intake.
- 1.6 People's risk of NCDs is also influenced by their exposure to nutrients in the womb. Although the science is still emerging, it has become evident that development during the "first 1000 days" from conception to age two is critical for the health of the child and later risks in adults.

2 THE DIETARY TRANSITION

- 2.1 Despite existing knowledge on the link between diets and NCDs, calories obtained from meat, oils, fats, sugars, and other refined carbohydrates, have increased during past decades, and those from fiber-rich foods (whole grains, legumes, roots) have declined. The overall proportion of processed food in diets has grown and is rising rapidly in low/middle income countries (LMICs).

- 2.2 The way people eat has also changed. Snacking and snack foods have grown in frequency and number; eating frequency has increased; away-from-home-eating in restaurants, in fast food outlets, and from take-out meals is increasing dramatically in LMICs; both at home and away-from-home-eating increasingly involve fried and processed food.
- 2.3 According to the World Health Organization (WHO), the proportion of deaths from NCDs has risen in past decades to become the leading cause of death globally. Deaths are projected to increase from 38 million in 2012 to 52 million by 2030. In 2012, approximately 42% of all NCD deaths globally occurred before age 70. In 2014, 11% of men and 15% of women were obese: over 42 million children under the age of 5 years were overweight in 2013.
- 2.4 The growing prevalence of unhealthy diets, obesity and diet-related NCDs is occurring even as hunger and malnutrition persist in different segments of the population. Most countries experience malnutrition in more than one form.

A food system includes all the elements (environment, people, inputs, processes, infrastructure, institutions) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities. It includes the web of processes by which institutions, organizations, and individuals transform inputs into the food we consume. A core element of all food systems is the “food supply chain” or “food value chain” through which foods moves from farm to fork.

3 CHANGES IN THE GLOBAL FOOD SYSTEM

- 3.1 Around the globe there is a diversity of types of food systems, often co-existing in the same country and community. These food systems can be broadly characterized into those dominated by “short chains” — in which food is produced largely for local markets or household production and is typically consumed after relatively little transformation; and those dominated by “long chains,” characterized by a global web of interactions between multiple actors from farm to fork in which production is far from consumption.
- 3.2 Although there remains a diversity of food systems, there has been a shift over time towards “longer chain” models. This shift has been taking place through human history, but intensified after the end of World War II in industrialized western countries, and much more recently in the rest of the world as part of the process of “globalization”.
- 3.3 The “modern” food system is dominated by these longer chain models, which are geared towards maximizing efficiency to reduce costs and increase productivity and are characterized by:
- 3.3.1 Intensive, industrial production practices, including high-yielding plant, animal & fish breeds, mechanization, the use of chemical inputs, and specialized farming with less on-farm diversity. Farms are larger and the number of farmers, especially smallholders, has declined dramatically all over the world.

- 3.3.2 A wide range of sophisticated storage, processing and marketing technologies, such as canning, cold storage warehouses, mass-scale milling, refining, and manufacturing using preservatives and other additives. This has enabled food to be transported longer distances, a process also enabled by the dramatic reduction in transport costs.
- 3.3.3 Greater orientation towards international trade and investment. Although most food is still produced within the country it is consumed, levels of food exports and imports have risen very significantly, as has cross-border investment. Initially this involved western companies investing in foreign markets as their own markets became saturated, but later involved south-south investment and most recently, companies in middle income countries acquiring US companies (e.g. a Brazilian company, JBS, has become one of the largest meat producers in the US through a series of mergers and acquisitions).
- 3.3.4 A more powerful private sector. The private sector has become more powerful relative to the public sector, and large, often transnational “food-consuming industries” – the primary processors, manufacturers, and retailers who “consume” the products produced by the earlier steps in the chain – have become more powerful than their suppliers, notably farmers. The most recent shift has been towards large supermarket chains.
- 3.3.5 Horizontal and vertical integration in the private sector. Companies have merged and acquired other companies in the same part of the supply chain (e.g. supermarkets buying other supermarkets), leading to a smaller number of companies and higher levels of market concentration (horizontal). Vertically, companies have increased their control over their upstream suppliers and/or downstream buyers to coordinate the entire chain involved in bringing food from farm to fork, including through more “contract farming.”
- 3.3.6 Higher post-farm costs and more differentiated “value-added” products. Today, a smaller percentage of the prices consumers pay reflect on-farm costs (e.g. of ingredients), with the rest being made up post-farm (e.g. labor, packaging, advertising, corporate profits). More and more transformations of foods take place beyond the farm gate.
- 3.3.7 Greater use of “promotional marketing”. Promoting brands encourages consumers to buy them, and to pay more for them, so adding further “value” for the food industry.

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4 IMPLICATIONS OF CHANGES IN FOOD SYSTEMS FOR NCD RISK

- 4.1 It is well established that the change to a more industrial, globalized food system has had implications for environmental sustainability. In the public health community, modern, industrialized food systems are also commonly implicated in the rising NCD burden. The WHO Director Margaret Chan, for example, has noted that “The world's food system, with its reliance on industrialized production and globalized markets — produces ample supplies, but creates some problems for public health.”¹
- 4.2 The implication is that the changes in food systems have dramatically influenced “food environments” — which a wide body of research indicates has played a role in shaping unhealthy eating patterns. Food environments are the collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food and drink choices, preferences, habits and nutritional status.
- 4.3 The body of literature examining the specific connections between changes in food systems and diet quantity and quality and NCDs remains relatively small. The literature that does exist focuses on the link between the policies and processes of the modern food system and changes in the food environment: the availability of food, and its nutritional quality, diversity, affordability and acceptability to consumers.

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5 FOOD SYSTEMS POLICIES AND PROCESSES RELEVANT TO NCD RISK

- 5.1 The modern food system has been influenced both by the food system policies of the past — the interventionist approach of the depression era and post-war period — and the policies of the present — the withdrawal of state intervention characterizing the “globalization” era, which started in the 1970s but intensified significantly in the 1990s. It has also been profoundly influenced by related changes in technology and supply chain management practices.
- 5.2 The Global Panel on Agriculture and Food Systems for Nutrition have categorized food system policies which influence diet quality and quantity as follows: agricultural production policies; policies on trade,

¹ Cited from: Countries vow to combat malnutrition through firm policies and actions, FAO News, November 21 2014. Available at: <http://www.fao.org/news/story/en/item/266559/icode/>

markets and industry; policies influencing consumer purchasing power; and policies influencing food transformation and consumer demand.

5.3 The available analysis on the role of agricultural production policies on NCD risk focuses primarily on **policies on investment into agricultural research and production subsidies**.

- 5.3.1 Public policies on investment into agricultural research have, since the early 20th century, aimed to increase productivity through the development of high-yielding varieties of select staples (e.g. corn, rice), oilseeds (e.g. soybeans) and livestock (e.g. poultry). Public (and private) investments in crop and livestock breeding accelerated exponentially after the end of World War II in the US, complemented by investments into research infrastructure e.g. the creation of land grant colleges. The 1960s saw the start of the “Green Revolution” in LMICs, i.e. public investments in research to increase productivity of wheat and rice in Latin America and Asia. Research also led to the development of productivity-enhancing inputs (e.g. chemical fertilizers, pesticides). In more recent years, research has focused on “biofortification” and the application of new genetic techniques for plant and animal breeding.
- 5.3.2 Government subsidies to production in North America, Western Europe and Japan, ushered in as the result of the Great Depression and World War II, biased resources towards increased production of commodities such as wheat, corn and soybeans (US); most grains, dairy and meat and sugar (European Union or EU) and rice (Japan).
- 5.3.3 In the context of pressure to liberalize trade in the 1990s, followed by food prices rises in the 2000s, some subsidies in the US and EU have been replaced with payments “decoupled” from production which reduce (in theory) the incentive to overproduce. In spite of these policy changes, the total amount spent by high-income countries — predominantly the EU, US, Japan, and South Korea — to support farmers rose from \$242 billion to \$273 billion between 2009 and 2010.
- 5.3.4 In contrast, most LMICs do not have a history of subsidising agricultural production, but of providing input subsidies (e.g. for fertilizer), which tend to favor the production of some crops over others (e.g. corn).

- 5.4 Food environments are the collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food and drink choices, preferences, habits and nutritional status.
- 5.5 A trade agreement is a treaty between two or more countries to set the terms of trade and/or private investment from companies in one state into another. Since the 1990s, countries have signed an increasing number of *free* trade and investment agreements, which incorporate a wide range of policy measures (see Box). Trade and investment agreements have been negotiated multilaterally (e.g. World Trade Organization), regionally (e.g. North American Free Trade Agreement), and bilaterally (e.g. US-Peru Trade Promotion Agreement).
- 5.5.1 By reducing the costs of trade, trade agreements have had the effect of opening up countries to: (i) greater imports and exports of foods and ingredients; (ii) greater cross-border investment by the food industry and the services that support them; (iii) a greater role for the large-scale private sector in food markets.
- 5.5.2 Trade agreements also have the potential to limit what is known as “policy space” for national governments to implement regulations (e.g. healthy eating policies) on the basis they may conflict with the aims of trade liberalization. For example, agreements on technical regulations may lead to policies being contested on the basis of lack of strong scientific evidence, while agreements on subsidies may prevent national policies to support domestic production of traditional staple foods or fruits and vegetables.
- 5.6 State interventions in agri-food markets have been dismantled as part of trade agreements and unilaterally. Private entities have become more dominant as procurers of agricultural products by replacing state marketing boards, state purchasing for food ration programs, and national agricultural banks.
- 5.7 Also exerting an important influence on the distribution of food have been policies on transportation, i.e., investment in the development of canals, roads and air networks.
- 5.8 Food markets are also influenced by competition and anti-trust policy, which has had an increasing tendency to favor the processes of horizontal and vertical integration by food industry.
- 5.9 Relevant **policies which influence consumer purchasing power** include subsidizing the price of food — a policy used in many LMICS, although less so today — and policies on school feeding and social protection.

By reducing the costs of trade, trade agreements have had the effect of opening up countries to: (i) greater imports and exports of foods and ingredients; (ii) greater cross-border investment by the food industry and the services that support them; (iii) a greater role for the large-scale private sector in food markets.

- 5.10 Relevant **policies on food transformation and consumer demand** include food quality and composition standards, and regulations on the labeling and marketing of food.

6 THE LINK BETWEEN FOOD SYSTEM POLICIES AND PROCESSES AND DIETARY CHANGES

- 6.1 Tracing the impact of food system policies and processes on specific dietary outcomes presents a challenge since in practice: (i) policies are typically implemented as part of a wider range of reforms; (ii) there is not necessarily a direct relationship between food produced on the “farm” and the final product given transformations before it reaches the consumer (e.g. fresh chicken into chicken nuggets); (iii) the process of “price transmission” means there is not necessarily a direct price relationship; (iv) there are different impacts through the food supply chain; (iv) policies have time lags — current dietary patterns may reflect policies from the past, not present.
- 6.2 Collectively, though, evidence indicates that the changes in the policies and processes of the food system have had the result of:
- increasing the supply and reducing the cost of calories from a smaller number of staples and oilseeds; increasing the availability and lowering the cost of feed for larger livestock operations; and increasing the availability of cheap ingredients for processed foods
 - reducing the costs of doing business by large scale private agribusiness and food companies
 - in turn, facilitating increased consumption of refined carbohydrates, meat, vegetable oils and processed foods; and an uneven influence on fruit and vegetables.
- 6.3 The increasing proportion of **refined carbohydrates** in the diet has been enabled by increased productivity and distribution of white (polished) rice and white flour/bread. For example:
- 6.3.1 White bread, once rarely consumed in Latin America, became widespread after the introduction of high-yield wheat varieties.
- 6.3.2 The breeding and adoption of high-yielding cereal varieties during the Green Revolution led to the dominance of rice in South Asia over coarse grains (e.g. sorghum) and pulses as a staple. Although intake of calories increased, pulse production and consumption declined, as did dietary diversity, and micronutrient malnutrition persisted. These changes were influenced by the adoption of high-yield breeds and other technologies, which made rice and wheat more profitable to produce relative to pulses.

6.3.3 Since white rice and white flour began to be imported into the Pacific islands, they have become the largest sources of energy, replacing “traditional” staples.

6.4 **Vegetable oils** are responsible more than any other food group for the increase of calorie availability worldwide. Oils are used in cooking in the home and by food service outlets, in margarines and vegetable shortenings, as the basis for “trans fats”, in many processed foods, and for animal feed. While a whole host of plants produce edible oils, world markets have become dominated by four, with two growing particularly rapidly — soybean oil and palm oil. The increasing quantities of vegetable oils overall, and of soybean and palm oil in particular, have been enabled by policies favoring production and trade of these oils. For example:

6.4.1 Policies on palm oil in Malaysia and Indonesia, including research funding, the opening of new and degraded lands for cultivation, lower limits on plantation size, schemes for smallholders, incentives for private sector investment and lower export taxes, led to greater production and exports and lower prices for palm oil.

6.4.2 Policies in Brazil to encourage more foreign investment encouraged horizontal and vertical integration in the soybean industry, leading to a more “efficient” industry with a greater ability to process and trade a greater quantity of soybeans at lower prices. To make use of plentiful supply, oil companies began to process oils to create hydrogenated (“trans”) fats with a longer shelf-life.

6.4.3 Trade policies in a handful of leading exporting and importing countries enabled greater consumption of palm and soybean oil in importing countries, notably China and India.

6.5 The increasing global consumption of **meat** and other animal products has been characterized by increased consumption of poultry as a result of greater production and lower prices. Intake of processed meat has also increased significantly. These changes can be associated with a range of processes and policies in the food system. For example:

6.5.1 The reorganization of poultry supply chains through vertical integration and technology has lowered the price of chicken. According to US chicken trade association “the vertically integrated broiler production system has promoted increased efficiency and reduced costs and resources used to produce broiler meat... [It has] saved consumers well over \$1 trillion on broiler meat purchases between 1980 and 2013.” With greater

Vegetable oils are responsible more than any other food group for the increase of calorie availability worldwide.

freedom to invest in processing facilities in other countries, American companies transferred this production model elsewhere e.g. to Mexico.

- 6.5.2 Subsidized corn and soybeans in the US has lowered the cost of animal feed, thus further lowering the costs of producing and consuming meat. More open trade policy has enabled the transfer of this feed to other countries. For example, according to a study by the USDA “[following NAFTA] U.S. feedstuffs enable Mexican livestock producers to expand output, lower production costs, and compete more effectively with meat imports from the US, Canada, and other countries. They also have made possible a marked increase in Mexican meat consumption.”
- 6.5.3 Technology transfer between countries has also had an impact. For example, in the Philippines, the 1987 Omnibus Investment Act provided tax exemption and credits for imports of livestock breeding stocks, thereby encouraging a switch to exotic over native breeds and the shift away from backyard to industrial production in the late 1980s/90s.
- 6.5.4 Reduction of state control on meat marketing has also had an effect. For example, in China, the government removed state procurement quotas and price controls on pork in 1985, which favored a shift toward specialized and industrialized pork production.
- 6.5.5 Although trade barriers still inhibit trade of meat itself, the relaxation of selected trade barriers between specific countries enabled a significant growth of poultry imports since 1990 e.g. exports of “dark meat” (leg quarters) from the US into Asia and Russia.
- 6.6 The increase in consumption of **packaged, processed foods** has been facilitated and enabled by changes in food systems in a number of ways. For example:
 - 6.6.1 Policies influencing production increased the availability and lowered the cost of inputs for processed foods. For example, corn derivatives are used widely in processed foods in the US (as a result of subsidies); and palm oil in LMICS (e.g. in the “flavoring” packets in instant noodles).
 - 6.6.2 Greater control over the supply chain and more modern production technologies made it easier for food companies to develop highly “differentiated products” in a cost-efficient manner. These “value-added” foods are considerably more profitable and enable companies to appeal to a wider and more complex consumer base.

- 6.6.3 The lower costs of international trade enabled food processors to rely more on lower cost ingredients sourced from overseas, so cutting their costs of production and facilitating the domestic production of processed foods. For example, there has been a rapid increase of exports of whey from cheese-producing countries into middle-income countries for use as a food ingredient.
- 6.6.4 Trade policy also enabled the introduction of new, processed foods into developing countries. For example, during a period of liberalization in the 1990s, imports of processed cheese slices grew by 3215% percent into Central America, making a product available that had previously not been sold in these countries. Evidence from the Pacific Islands shows that a higher percentages of unhealthy food imports is associated with higher percentages of caloric consumption from 'unhealthy' foods.
- 6.6.5 More open investment policies led to soaring foreign direct investment by agribusiness, food manufacturers and supermarket chains. Cross-country studies indicate that FDI liberalization through trade agreements with the US significantly increases the availability of soft drinks within the signatory country, and overall levels of market deregulation are associated with higher levels of fast food consumption.
- 6.6.6 Exports of processed foods from the US have grown fastest in countries where modern grocery retailing is growing the fastest, suggesting the growth of supermarkets also facilitates the growth of the processed food markets. Supermarkets further influence consumption by offering a huge variety of previously unavailable products and a having more aggressive in-store promotions. Supermarkets have been found to charge lower prices for processed foods relative to informal retail, although prices for fruits and vegetables in LMICs tend to remain higher.
- 6.6.7 Greater investment in advertising has been facilitated by the availability of resources freed up by low cost of inputs, and the transnationalization and consolidation of advertising agencies. During the 1990s, domestic advertising expenditures by the two leading soft drink and fast food companies declined in the US but increased elsewhere, reflecting the recognition by those companies of the increased growth potential in newer markets. The US, however, remains the world largest market for advertisers. The total amount spent on advertising by leading food companies in 2009 was \$1.79 billion.

6.7 The picture for **fruits and vegetables** is more mixed. There is a 22% supply gap for fruits and vegetables globally i.e. only 78% of consumption needed for optimal health is produced. The gap increases significantly as national income level declines. This has been attributed in part to food systems policies and lack of technology and infrastructure. For example:

6.7.1 In the US, growers of “specialty crops” like fruits and vegetables have historically been penalized if they receive federal subsidies for other crops; in the EU, fruit and vegetable production has received on average around 3% of the EU agriculture budget, despite contributing to around 18% of agricultural value. Globally, relatively little public agricultural research and development has focused on fruits and vegetables.

6.7.2 Many LMICs face barriers to fruit and vegetable production and distribution, including: technical impediments to improving produce quality; infrastructural deficits affecting production (e.g. poor irrigation); problems with postharvest storage and processing (e.g. inadequate refrigeration); and transport (e.g. bad roads).

6.7.3 Although there are still high tariffs and other non-tariff barriers to trade in fruits and vegetables, international trade in fruits and vegetables has expanded rapidly in recent decades, enabling increased consumption of select “high value” fruits and vegetables. In the US, consumption of imported fruit tripled from 6% of total consumption to 22% between 1980 and 2000. Chile underwent market deregulation in the 1970s to become a lead fruit exporter to the US (out-of-season consumption of Chilean grapes was one factor behind the 2.6 fold increase in grape consumption between 1970-2009). The Andean Trade Preference Act enabled Peru to become one of the largest producers and exporters of asparagus in the world; imports and consumption of fresh asparagus subsequently increased in the US, even though domestic production declined.

6.7.4 Trade in processed fruits/vegetables has also increased: trade in fruit juices has increased proportionally faster than fresh; as has trade in frozen potatoes used for French fries.

7 SOLUTIONS: DE-LINKING THE ASSOCIATION BETWEEN MODERN FOOD SYSTEMS AND UNHEALTHY DIETS

7.1 The relatively small number of reports and papers on the link between food system policies and processes and healthy eating (see “Key Readings and References”) propose a range of solutions, summarised below. The outcome documents of the FAO/WHO Second International Conference on Nutrition held in Rome, November 2014, the *Rome Declaration on Nutrition* and the accompanying *Framework for Action* also included a range of recommendations on food systems solutions. Proposed solutions include both “short chains” and “long chains”. The distinction is important since, as already indicated, even if agriculture produces healthier ingredients, they can be substituted and transformed through long chains (e.g. soybean oil can become trans fats; chicken can become nuggets). The solutions proposed have not all been tried and tested — and do not necessarily represent all the solutions possible.

7.2 **Smallholder and community food production for local markets.** This approach is designed to bypass long-chains food systems and leverage “alternative” short-chains to increase access to fruits, vegetables and legumes for local people. For example:

7.2.1 **School gardens and urban agriculture.** According to a recent review of policies to address NCDs, this approach is already used in LMICs to promote fruit and vegetable consumption, although typically in the context of food insecurity and micronutrient deficiencies. Programs have also been developed to address NCDs directly (e.g. in the Pacific Islands), which focus on the production of “traditional” crops. Gardening and urban agriculture initiatives also exist in high-income countries, often popularized by public figures. All programs typically involve an educational component. This approach was highlighted by the 2014 Council on Foreign Relations report on NCDs as a promising area for NCD prevention in high-income countries to learn from LMICs.

7.2.2 **Building infrastructure to link local farmers and local consumers.** With short, more manageable chains, increases in production of nutritious foods can be directly targeted towards increased consumption by local people through direct farm-consumer supply chains. This provides a means to recapture value from the supply chain from by local farmers, an approach consistent with current agricultural development initiatives to support smaller farmers. This approach is already being taken in the United States through direct marketing initiatives, and in “value chain” interventions in LMICS in the context of food

insecurity and micronutrient deficiencies. For example, Hawkes and Ruel (2010) provide several examples of “value chain” initiatives in LMICs designed to enable more nutritious foods to come to market.

- 7.3 Biodiversity for dietary diversity.** A related solution is increasing agrobiodiversity in the face of increasing reliance on a small number of staple crops. This solution, championed by the CGIAR Center Bioversity, accepts that “long chains” mean there is not necessarily a direct link between agricultural biodiversity and nutrition. (It is notable that while there is a positive relationship between production diversity and lower rates of undernutrition in low income countries, in middle and high income countries the relationship disappears and is replaced by supply diversity (i.e. national production + imports) and nutrition. However, the approach maintains that supporting traditional crops, underutilized species and wild-harvested species has an important role to play in: (1) creating an enabling environment for diverse and *sustainable* diets for all; and (2) providing more diverse diets among local communities through “short chains”. As set out in the book *Diversifying food and diets: using agricultural biodiversity to improve nutrition and health*, increasing diversity can bring benefits through long chains — for example previously under-utilised crops (e.g. quinoa and maca from the Andes) are now more widely available in global markets — and through short chains (e.g. African green leafy vegetables).
- 7.4 Maintaining “traditional” wetmarkets.** Observations that traditional “wet markets” are a source of healthy foods have led to recommendations that these traditional — and threatened — food retail outlets are supported in order to maintain consumption levels. In LMICs, traditional retail outlets continue to be the preferred avenue for most consumers to access fresh, unprocessed products, and market shares held by traditional outlets for fruits and vegetables remain higher than supermarkets. Prices tend to be lower (fewer costs than longer supply chains and value not being captured by additional supply chain actors), there is greater flexibility in product standards, and they are convenient for consumers. Although no examples of this approach were identified, it is analogous to the development of farmers markets in the United States.
- 7.5 Food procurement by the public sector.** This approach aims to leverage what remains of the purchasing power of the public sector to effect positive change in the food system. It is relevant from an NCD perspective because procurement policies can integrate nutritional standards for food served in public

institutions and be used to create new, or more stable, markets for producers of healthier foods. The evidence suggests procurement standards are inexpensive to implement, lead to increased purchasing of healthier foods — and address political and economic barriers by taking a market-based approach.

7.5.1 In **North America**, governments, public institutions and NGOs have developed a range of nutrition standards for the purpose of procurement. These standards aim to reduce specific nutrients/food components, promote others, and/or limit calories and portion sizes. A minority also include sustainability criteria. New York City, for example, has a set of nutrient-based Food Standards for all food procured or served by city agencies, which applies to about 260 million meals/snacks daily. New York State has a set of Food Purchasing Guidelines to encourage city agencies to procure food products that are grown, produced or harvested in New York State.

7.5.2 In the **EU**, the School Fruit Scheme (2009) was designed to increase fruit and vegetable consumption among children while also stabilizing EU fruit and vegetables markets. The Scheme involves co-funding national school fruit programs. In 2010/11, the Scheme had been taken up by 24 countries and reported to have reached 8,146,290 children; evaluation of the Scheme found that it has had small but positive outcomes for horticultural production in the EU and led to an increase in consumption.

7.5.3 In **LMICs** “Homegrown School Feeding” programs exist in around 20 countries to support farmers, improve nutrition standards (typically in the context of food insecurity) and provide education. Global estimates suggest that approximately 370 million children received school feeding in 2012. Another procurement program of note is the World Food Program’s (WFP) Purchase for Progress (P4P) which operates in around 20 countries in sub-Saharan Africa, Latin America and the Caribbean and aims to increase participation of local small farmers in WFP procurement activities and improve availability of and access to nutritious food for participating producer households

7.5.4 **Brazil** has taken a lead in developing procurement procedures to support farmers while also boosting nutrition security. For example, the Program of Food Acquisition (PAA) sources foods from family farmers to provide food to programs serving the poor. Of note, implementing the PAA required a change to the public procurement law to remove the bias away from larger,

capital-intensive entities. Building on the PAA, a law passed in 2009 in Brazil stipulates that 30% of the food budget should be used to purchase foods directly from family farms. India has also attempted to use its Decentralised Procurement Scheme to improve the quality of its National Mid-Day Meal program, although it is not clear if this has been implemented.

- 7.6 Investing in research and supply chain management for the production and distribution of fruits, vegetables, legumes and other nutrient-dense foods. This approach has been suggested in the context of “long chains” where consumers are further from production.

7.6.1 **Reorienting investments in agricultural research** towards the production of fruits, vegetables, legumes and nutritious coarse grains is a solution typically proposed by the agricultural community. It appears, for example, in the latest CGIAR strategic plan on the basis that improved productivity would reduce the price of these foods and support dietary diversity, and post harvest research could extend limited seasonal availability and reduce nutrient losses.

7.6.2 **Supply chain management** has been proposed to overcome bottlenecks to the supply of fruits and vegetables and other nutrition foods (e.g. investments in transportation, distribution networks, procurement logistics and price information systems) and to ensure that changes in production are transmitted all the way to final consumers.

- 7.7 **Changes in food processing.** The rise in importance of food processing beyond the farm gate means it too has been a focus of proposed solutions for consumers served by “long chains”.

7.7.1 **Reformulation and product development.** This is the solution most commonly proposed by the food industry. To date, food industry initiatives have focused on reducing salt (there are now salt reformulation initiatives in around 61 countries) and trans fats in processed foods and foods sold by restaurants/fast food chains. Most initiatives rely on voluntary actions, but some countries have banned trans fats and set mandatory limits on salt in certain foods. A smaller number have focused on sugar and saturated fats. A particularly interesting example comes from Singapore, where the Health Promotion Board worked with oil suppliers and “hawkers” to produce an affordable, blended oil with lower saturated fat relative to 100% palm oil.

7.7.2 **Major changes in the nature of processing.** It has been proposed that food processors of all scales could do much more

to ensure processing does not strip fiber and positive nutrients from foods. Governments could also engage more extensively with companies to encourage more widespread substitutions from less healthy to healthier ingredients, including by taxing certain foods and ingredients.

7.8 Leveraging international trade. One of the most commonly proposed solutions to the problems presented by food systems globalization is to intervene in trade. Proposed approaches include:

7.8.1 Ban imports of unhealthy foods. These proposals have been made in the context of island countries that rely heavily on imported foods. Three Pacific Island countries have attempted to moderate their food supply by banning imports of fatty meat (e.g. “turkey tails”); these bans have either been removed or converted to high sales taxes given they are not permitted under trade rules.

7.8.2 Ensure trade agreements do not compromise the ability to implement public health measures. Trade and investment treaties usually also allow latitude for public health measures provided the same goal cannot be achieved by other measures. However, lack of capacity may lead to the threat of trade policy-based penalties inhibiting countries from taking action. For example, a proposal by the government of Thailand to introduce traffic light labels on packaged foods was shelved after it was queried in the WTO TBT Committee. Two suggestions to overcome this problem include greater participation by the nutrition and NCD community in trade negotiations (e.g. the inclusion of a nutritionist in Samoa’s WTO accession committee enabled the development of a strategy to mitigate the effect of the removal of the “turkey tail” ban); and implementing a comprehensive nutrition policy (on the basis it increases the defensibility of nutrition policies since it is using a range of legitimate avenues).

7.8.3 Leverage existing trade-related mechanism for positive influence. For example, Thow and Priyadarshi (2013) propose using Aid for Trade funds (which can be used for strategic investments to improve agricultural development, internal and cross-border transport and storage, technology and infrastructure) to promote fruit and vegetable production and consumption. Another proposal is to **leverage the International Food Code** — the FAO/WHO Codex Alimentarius. Though voluntary, the Codex is used as a reference in trade disputes and provides guidelines on relevant policy areas, including nutrition labeling, food composition, and nutrient reference values.

7.9 Policies to regulate the food industry, improve food environments and align fiscal incentives

7.9.1 A commonly proposed solution is for governments to set a coherent **framework of standards and regulations for the food industry** to disincentivize the production, sale and marketing of foods associated with NCDs, including clear standards for promotional marketing. Very clear standards on food labeling, marketing and quality from a health perspective would send signals back into the food system and alter the behavior of food system actors. There is evidence, from nutrition labeling standards for example, that the food industry alters their products in response to regulation.

7.9.2 These standards also have the effect of improving consumer food environments, thus creating an enabling environment for healthier preference learning among children, while encouraging adults to re-assess their food choices. Further policies that can influence consumer demand include offering healthier food in public settings (see “public procurement”), improving the community retail environment (see “wet-markets”), behavior change communication programmes (e.g. nutrition education in schools, public awareness campaigns, and targeted subsidies and taxes).

7.9.3 Health-related food taxes are in place in Finland, France, Hungary, Mexico and some Pacific Islands, and initial results suggest that they can influence purchasing. Although less discussed, **fiscal measures** can also be used further back in the supply chain to create incentives for healthier production e.g. subsidies for oilseeds with healthier fatty acid profiles.

7.10 The final category of solutions concerns **improving the governance of the food system** through greater policy and governance coherence and capacity building.

7.10.1 **Coherence in policy and governance.** One of the hallmarks of the modern food system is the increased coordination of the private sector. Yet there is a lack of coherence around food systems, nutrition and health in the public sector. It has thus been proposed that more coherence in governance and policy is needed at the local, national and global level. At the local level, local food policy councils have been developed in North America as a mechanism for government officials, health professionals, employers, food store owners, farmers, school staff and community members to work together on food and nutrition issues. At a national level, governments could review food system policies for coherence with dietary objectives and realign

Very clear standards on food labeling, marketing and quality from a health perspective would send signals back into the food system and alter the behavior of food system actors.

them so they “do no harm” and support the prevention of diet-related NCDs. They could also improve cross-sectoral dialogue and governance structures across government. At the global level, a robust discussion is needed to further a more coordinated and coherent approach to the governance of food systems.

- 7.10.2 **Capacity building.** Building capacity is needed to enable a more concerted and effective response to the NCD threat. Governments have little knowledge about how to address NCDs through food systems approaches. Educational institutions can play a role in by building food systems into nutrition and health curriculums. There is a specific need to build capacity in the public sector in LMICs for developing trade-compliant nutrition policy options and defending these options. Greater capacity is also needed among civil society organizations to demand change.

Policy changes need to address both short and long chains, since in practice, consumers experience both: even the poorest smallholders in the remotest rural areas have access to “long chain” markets for at least part of their consumption needs, while western urbanites have access to farmers markets and high-value niche foods.

8 CHALLENGES TO DEVELOPING AND IMPLEMENTING FOOD SYSTEM SOLUTIONS TO NCDS

- 8.1 There are a huge number of challenges to leveraging food systems for NCDs, many of which are evident from the evidence presented here. Collectively, four of the overarching challenges can be summarized as follows:
- 8.2 The **vastness of global food system and the power and interests of the huge range of actors within in it** means no one single policy will be sufficient; a whole host of policy changes working in tandem will be needed. Many of these approaches will work “at the edges”; others must be more fundamental. They need to address both short and long chains, since in practice, consumers experience both: even the poorest smallholders in the remotest rural areas have access to “long chain” markets for at least part of their consumption needs, while western urbanites have access to farmers markets and high-value niche foods produced in specific geographical regions. Long chain approaches are particularly challenging since changes in agricultural production practices are unlikely to be effective beyond local markets unless they take into account how foods are processed, distributed and marketed through the system. Thus, as put by the FAO report *Food Systems For Better Nutrition*, “the nature of the food system in a given location can guide the choice of interventions to take advantage of nutrition opportunities. For example, in a subsistence-based agricultural system, interventions aimed directly at improving the nutritional content of crops for own consumption would be promising. In urban areas where the food system is almost entirely commercial, interventions in processing and retailing could be more effective in

shaping the system to support better nutrition.” A fundamental issue is how such solutions can be identified given the huge diversity of contexts. Moreover, nutrition and health are not the primary focus of the policies that influence the food system. Like concerns about sustainability, they are not considered, or overridden by economic goals among producers, traders and processors.

- 8.3 There has been growing amount of activity to develop and implement “short-chain” food approaches to address undernutrition, now collectively termed “nutrition-sensitive agriculture.” Donor funding to such initiatives has increased very significantly in the past five years. Many of these “short chain” solutions also apply to NCDs. Yet to date there has been a **lack of synergy between food system approaches to addressing undernutrition and NCDs**. An analysis of the “nutrition-sensitivity” of food systems policies in eight LMICs found no evidence that efforts to leverage food systems to address undernutrition were viewed by countries as a channel to addressing NCDs. Funders rarely have NCDs in mind when they support agriculture-food systems -nutrition programs. Moreover, there are perceived tensions since addressing undernutrition concerns increasing the supply and lowering prices of food — while addressing NCDs also involves reducing supply and raising prices of certain foods.
- 8.4 Another major challenge is the **perceived lack of evidence, challenges in gathering evidence of effectiveness and inadequate research**. The effectiveness of food system-based policies and interventions to address nutrition in general not been rigorously evaluated in the same way as for health-based direct interventions. Evaluation methods based on randomized controlled trials — considered the most reliable way to demonstrate results in the health sector — are generally impossible to apply to the food system except for small-scale projects. This is because of the “long chain” nature of the relationship in many instances, and because large-scale policy interventions in food systems do not lend themselves to control groups and randomization. Although a challenge for all nutrition problems, there has been a significantly growing amount of research evaluating the effects of food systems interventions for undernutrition — but not NCDs. A recent study commissioned by the UK Department for International Development found that in 2012 there were over 150 current and planned research projects and programs on agriculture for improved nutrition, but only four were concerned with NCDs. There was also a significant gap into research into the effect of food systems policies on nutrition across the board, with just five projects identified. Major research programs concerned with agri-food systems and health also tend to pay little attention to NCDs e.g. the

CGIAR Collaborative Research Program ‘Agriculture for improved nutrition and health’ (A4NH).

- 8.5 While “globalization” and “industrial food systems” are often cited as an underlying cause of unhealthy eating, **there is no history of formulating healthy eating policies with a comprehensive food systems-centered approach.** “Food systems” are not yet seen as a core part of the NCD policy agenda. Moreover, for many, food systems are unrelated to NCDs. Instead, they view NCDs as a problem of “demand” — changing lifestyles, lack of knowledge, inherent unhealthy preferences etc. This creates a tension, and an apparent conflict, between supply-driven and demand-oriented approaches. The underlying disagreement has been summarised by agricultural economist Professor Per Pinstrup-Andersen as follows: “Does the [food] system take its cues from the consumer and passively produce what she/he wants, does the consumer passively acquire what the system makes available or does the system coerce the consumer to acquire what it wants to produce?” This reflects a false dichotomy between supply- and demand side approaches: under a food systems lens, both are needed for positive feedbacks and mutual reinforcement. Considerable capacity is needed in government and among other relevant stakeholders to design and implement the “smart food policies” needed to alter both supply and demand in a mutually reinforcing manner.

Considerable capacity is needed in government and among other relevant stakeholders to design and implement the “smart food policies” needed to alter both supply and demand in a mutually reinforcing manner.

9 WHAT FUNDERS CAN DO TO ADDRESS DIET-RELATED NCDs THROUGH FOOD SYSTEMS

- 9.1 Though the challenges are significant, funders have an important role to play in supporting solutions to diet-related NCDs through the food system. Potential roles are four-fold: creating synergies in their funding programs; supporting specific programs, structures and policies; capacity building; and supporting research.

9.2 Funding synergies

- 9.2.1 Funders should engage with, and convene, others funders with food system programs focused on food insecurity, undernutrition and sustainability with the aim of identifying synergies between these programs and unhealthy diets and NCDs. The objective would be to identify ways of incorporating healthy eating goals into existing food systems programs concerned with undernutrition and/or sustainability. New calls for proposals on undernutrition and/or sustainability should require that grantees include ways of addressing diet-related NCDs while also addressing undernutrition/sustainability challenges. Key areas of synergy could be fruit and vegetables

and legumes, “short chain” solutions, sustainable diets and agrobiodiversity. There is also space for more alignment around what is needed for a “sustainable and healthy meat system” i.e. sustainable production of meat in a way that discourages excess consumption but enables modest consumption.

9.2.2 Funders should also assess whether and how addressing NCDs could be built into other funded programs relevant to food systems (e.g. in urban planning, water), and require the same of grantees.

9.2.3 If engaged in agricultural research funding, funders should realign investments with what is needed for healthier diets, and include supply chain management as an integral part of the research.

9.3 Support for specific programs, structures and policies. Funders can:

9.3.1 Support home and school gardens and other local community food production programs. For example, funders could develop a campaign aiming to equip all schools around the world with a school garden.

9.3.2 Explore potential roles for building agrobiodiversity, supporting public procurement policies, and/or in maintaining/building retail markets selling healthier foods to people on low incomes.

9.3.3. Support explicitly “systems-based” approaches to addressing unhealthy eating, obesity and diet-related NCDs.

9.3.4 Be vocal in their support for national and local policies to improve consumer food environments. They should support civil society in order to build demand for these policies; and build capacity among all stakeholders to design and implement smart food policies that alter both supply and demand in a systems-based approach.

9.4 **Capacity building.** Funders can help build capacity in:

9.4.1 Governments to identify and implement smart food systems policies to address NCDs, including in “long chains;” and to assess and manage the health risks introduced through trade agreements

9.4.2 Civil society to campaign for effective food industry regulations, policies to improve food environments, and fiscal incentives. One policy area requiring particular support is marketing to children

9.4.3 Educational institutions to enhance education and training on the link between food systems and NCDs;

9.4.4 International agencies to improve food system governance.

9.5 **Support research.** Funders can help build the evidence base for food systems action, including support for:

9.5.1 Assessments of the effect of food systems and food systems policies on dietary outcomes and on synergistic outcomes (e.g. sustainability);

9.5.2 Evaluations of existing food systems programs and policies on unhealthy diets and malnutrition in all its forms;

9.5.3 “Value chain” or other forms of food system analysis to identify supply side solutions to specific healthy eating goals in specific localities and countries.

9.5.4 Research on food systems solutions (both short- and long-chain) to unhealthy diets/NCDs which can be transferred across countries.

10 KEY READINGS AND REFERENCES

10.1 Background and statistics on NCDs

Daniels ME, Donilon TE Bollyky TJ. The Emerging Global Health Crisis: Noncommunicable Diseases in Low- and Middle-Income Countries. Independent Task Force Report No. 72 New York: Council on Foreign Relations, 2014. Available at: <http://www.cfr.org/diseases-noncommunicable/emerging-global-health-crisis/p33883>

World Health Organization. Global Status Report on Noncommunicable Diseases 2014. Geneva: WHO, 2014.

10.2 Key readings on food systems, nutrition and NCDs

De Schutter O. Report submitted by the Special Rapporteur on the right to food, Olivier De Schutter. Human Rights Council Nineteenth Session, Agenda Item 3. 26 December 2011. Available at: http://www.ohchr.org/Documents/HRBodies/HRCouncil/RegularSession/Session19/A-HRC-19-59_en.pdf

Fanzo, J., Hunter, D., Borelli, T., & Mattei, F. (Eds.). (2013). Diversifying food and diets: using agricultural biodiversity to improve nutrition and health. Routledge.

FAO. *The State of Food and Agriculture 2013 Food Systems For Better Nutrition*. Rome: FAO, 2013. Available at: <http://www.fao.org/docrep/018/i3300e/i3300e00.htm>

Global Panel on Agriculture and Food Systems for Nutrition. 2014. *How can Agriculture and Food System Policies improve Nutrition?* Technical Brief, London, UK: Global Panel on Agriculture and Food Systems for Nutrition.

Hawkes C, Blouin C, Henson S, Drager N, Dubé L (editors). Trade, Food, Diet and Health: Perspectives and Policy Options. Oxford: Wiley Blackwell, 2010.

Hawkes C, Friel S, Lobstein T, Lang T. Linking agricultural policies with obesity and non-communicable diseases: a new perspective for a globalizing world. *Food Policy*, 2012 37(3):343-353.

Hawkes C, Thow AM, Downs S, Ling AL, Ghosh-Jerath S, Snowdon W, Morgan E, Thiam I, Jewell J. Identifying effective food systems solutions for nutrition and non-communicable diseases: examples from the fats supply chain. SCN News No 40, 2013: 39-47 Changing Food Systems for Better Nutrition.

Institute of Medicine. A Framework for Assessing Effects of the Food System. Washington DC: National Academies, 2015.

Nugent R. Bringing Agriculture to the Table: How Agriculture and Food Policy Can Play a Role in Preventing Chronic Disease. Chicago: The Chicago Council on Foreign Affairs, 2011. Available at: <http://www.thechicagocouncil.org/publication/bringing-agriculture-table-how-agriculture-and-food-policy-can-play-role-preventing#sthash.Bc0wDKyP.dpuf>

SCN News: Changing Food Systems for Better Nutrition. No 40, 2013. Geneva: United Nations System Standing Committee on Nutrition. Available at: http://www.unscn.org/files/Publications/SCN_News/SCNNEWS40_final_standard_res.pdf

Second International Conference on Nutrition, Rome, 19-21 November 2014. Conference Outcome Document: Rome Declaration on Nutrition. Available at: <http://www.fao.org/3/a-ml542e.pdf>

10.3 Selected additional references

AFC Management Consulting/CO CONCEPT. Evaluation of the European School Fruit Scheme Report prepared for European Commission Directorate-General for Agriculture and Rural Development. Brussels: EC, 2012. Available at: http://ec.europa.eu/agriculture/evaluation/market-and-income-reports/2012/school-fruit-scheme/fulltext_en.pdf

De Vogli, R., Kouvonen, A., & Gimeno, D. (2014). The influence of market deregulation on fast food consumption and body mass index: a cross-national time series analysis. *Bulletin of the World Health Organization*, 92(2), 99-107A.

De Schutter O. *Briefing Note Number 8: The Power of Procurement*. April 2014. Available at: http://www.srfood.org/images/stories/pdf/otherdocuments/20140514_procurement_en.pdf

Downs SM, Thow AM, Ghosh-Jerath S, Leeder SR. The feasibility of multisectoral policy options aimed at reducing trans fats and encouraging its replacement with healthier oils in India. *Health Policy Plan*. 2014 May 14. pii: czu031.

Englberger L1, Lorens A, Pretrick M, Tara MJ, Johnson E. Local food policies can help promote local foods and improve health: a case study from the Federated States of Micronesia. *Hawaii Med J*. 2011 Nov;70(11 Suppl 2):31-4.

Fanzo, J, Lachat, C, Sparling, T, Olds, T. "The nutrition sensitivity of agriculture and food policies: a summary of eight country case studies." *SCN News*, Issue 40, 2013:19-25.

Gardner CD1, Whitsel LP, Thorndike AN, Marrow MW, Otten JJ, Foster GD, Carson JA, Johnson RK. Food-and-beverage environment and procurement policies for healthier work environments. *Nutr Rev*. 2014 Jun;72(6):390-410.

Gómez, Miguel I., and Katie D. Ricketts. "Food value chain transformations in developing countries: Selected hypotheses on nutritional implications." *Food Policy* 42 (2013): 139-150.

Hawkes C. Agricultural and food policy for cardiovascular health in Latin America. *Prevention and Control: the Journal of the World Heart Federation* 2007 2:137-147.

Hawkes C. Promoting healthy diets and tackling obesity and diet-related chronic diseases: what are the agricultural policy levers? *Food and Nutrition Bulletin* 2007 20:S312-22.

- Hawkes C and Thow A-M. The implications of the Central American Free Trade Agreement (CAFTA) for the nutrition transition in Central America. *Pan American Journal of Public Health*, 2008; 24(5): 345-360.
- Hawkes C. Dietary implications of supermarket development: a global perspective. *Development Policy Review* 2008; 26 (6):657-692.
- Hawkes C. Trade liberalization and the nutrition transition: three case studies. In Hawkes C, Blouin C, Henson S, Drager N, Dubé L (editors). *Trade, Food, Diet and Health: Perspectives and Policy Options*. Oxford: Wiley Blackwell, 2010.
- Hawkes C, Ruel M. Value Chains for Nutrition. Washington DC: IFPRI, 2010. Online publication at: <http://www.ifpri.org/publication/value-chains-nutrition>
- Hawkes C, Turner R, Waage J. *Current and planned research on agriculture for improved nutrition: a mapping and a gap analysis*. A report for DFID. 1st August 2012. Available at: [http://www.lidc.org.uk/_assets/DfID%20report%20\(LCIRAH%20mapping%20and%20gap%20analysis\)%2001%20Aug%202012.pdf](http://www.lidc.org.uk/_assets/DfID%20report%20(LCIRAH%20mapping%20and%20gap%20analysis)%2001%20Aug%202012.pdf)
- Hawkes C. Food marketing: a driver of the modern food system. In: Neff R (editor). *Introduction to the US Food System: Public Health, Environment, and Equity*. New York: John Wiley, 2014 p. 237-262
- Hawkes C, Smith T, Jewell J, Wardle J, Hammond R, Friel S, Thow A-M, Kain J. Smart food policies for obesity prevention. *Lancet*. 2015 Feb 18. pii: S0140-6736(14)61745-1.
- Herforth A. *Synthesis Of Guiding Principles On Agriculture Programming For Nutrition*. Rome: FAO, 2013. Available at: http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/Synthesis_of_Ag-Nutr_Guidance_FAO_IssuePaper_Draft.pdf
- Lachat C, Otchere S, Roberfroid D, Abdulai A, Seret FM, Milesevic J, Xuereb G, Candeias V, Kolsteren P. Diet and physical activity for the prevention of noncommunicable diseases in low- and middle-income countries: a systematic policy review. *PLoS Med*. 2013;10(6):e1001465.
- National Chicken Council. Vertical Integration. Available at: <http://www.chickenroost.com/vertical-integration/>
- Niebylski ML, Lu T, Campbell NR et al. Healthy food procurement policies and their impact. *Int J Environ Res Public Health*. 2014 Mar 3;11(3):2608-27.
- Noonan K1, Miller D, Sell K, Rubin D. A procurement-based pathway for promoting public health: innovative purchasing approaches for state and local government agencies. *J Public Health Policy*. 2013 Nov;34(4):528-37.
- Partnership for Child Development. *Linking school feeding with agriculture development* Report of Technical meeting on school feeding programmes linked to small holder farmer production London, 27-29 September 2011.
- Remans, R., Wood, S. A., Saha, N., Anderman, T. L., & DeFries, R. S. (2014). Measuring nutritional diversity of national food supplies. *Global Food Security*, 3(3), 174-182.
- Sahal Estimé M, Lutz B, Strobel F. Trade as a structural driver of dietary risk factors for noncommunicable diseases in the Pacific: an analysis of household income and expenditure survey data. *Global Health*. 2014 Jun 13;10:48. doi: 10.1186/1744-8603-10-48.
- Siegel KR, Ali MK, Srinivasiah A, Nugent RA, Narayan KM. Do we produce enough fruits and vegetables to meet global health need? *PLoS One*. 2014 Aug 6;9(8):e104059. doi: 10.1371/journal.pone.0104059.
- Stuckler D, McKee M, Ebrahim S, Basu S. Manufacturing epidemics: the role of global producers in increased consumption of unhealthy commodities including processed foods, alcohol, and tobacco. *PLoS Med*. 2012;9(6):e1001235.

2 DIET, CHRONIC DISEASE AND THE FOOD SYSTEM: MAKING THE LINKS, PUSHING FOR CHANGE

Tandon S., Landes MR, Woolverton A. The Expansion of Modern Grocery Retailing and Trade in Developing Countries. ERR-122. U.S. Dept. of Agriculture, Econ. Res. Serv. July 2011

Thow A-M and Hawkes C. The implications of trade liberalization for diet and health: a case study from Central America. *Globalization and Health* 2009, 5:5.
<http://www.globalizationandhealth.com/content/5/1/5>

Thow AM, Swinburn B, Colagiuri S, Diligolevu M, Quested C, Vivili P and Leeder S 2010. Trade and food policy: case studies from three Pacific Island Countries. *Food Policy*, 35:556–564.

Thow AM, Priyadarshi S. Aid for Trade: an opportunity to increase fruit and vegetable supply. *Bull World Health Organ.* 2013 Jan 1;91(1):57-63.

Thow AM, McGrady B. Protecting policy space for public health nutrition in an era of international investment agreements. *Bull World Health Organ.* 2014 Feb 1;92(2):139-45.

von Tigerstrom B. How do international trade obligations affect policy options for obesity prevention? Lessons from recent developments in trade and tobacco control. *Can J Diabetes.* 2013 Jun;37(3):182-8.

Zahniser, S. (Ed.), 2005. NAFTA at 11: The Growing Integration of North American Agriculture. USDA, Washington, DC.

DIETARY GUIDELINES AND SUSTAINABLE DIETS: PATHWAYS TO PROGRESS

Hugh Joseph, PhD

Assistant Professor, Adjunct, Friedman School of Nutrition Science & Policy, Tufts University, Massachusetts, USA

Kate Clancy, PhD

Adjunct Professor, Friedman School of Nutrition Science and Policy, Tufts University, Massachusetts, USA
Visiting Scholar, Center for a Liveable Future, Johns Hopkins School of Public Health, Maryland, USA

EXECUTIVE SUMMARY

'Sustainable dietary guidelines' incorporate dimensions of sustainability into concise diet-related recommendations. This paper reviews the current status of such guidance, and links it to a 'sustainable diets' model. It reviews challenges, presents opportunities for future progress, and introduces a 'framework' approach as a strategy to facilitate effective development and implementation of such guidance. Recommendations for how funders can support sustainable dietary guidance development are included.

Note: This paper incorporates work being carried out by the Tufts University 'Guidance for Sustainable Diets' Working Group (GSDWG)¹

DIETARY GUIDELINES AND SUSTAINABILITY — AN OVERVIEW

This section presents brief synopses of five categories of dietary guidelines as they relate to sustainability: **(a)** Food Based Dietary Guidelines (FBDG); **(b)** FBDG supporting documents that address sustainability; **(c)** sustainable dietary guidelines by other government-supported bodies; **(d)** sustainable dietary guidelines issued by non-governmental entities; and **(e)** single-focus sustainable dietary guidelines issued by various non-governmental bodies. These distinctions should help clarify how sustainability is (and is not) addressed in dietary guidelines, both in terms of content and of sponsorship.

While multiple definitions of sustainability related to food have been published, the one we use here originates with the U.S. Academy of Nutrition and Dietetics and three other organizations, and states: "We support socially, economically, and ecologically sustainable food systems that promote health — the current and future health of individuals, communities, and the natural environment".² It also considers such a system to be health promoting, sustainable, resilient, diverse, fair, economically balanced, and transparent. This explanation is one that is germane to dietary guidance and to sustainable diets as discussed below.

National food-based dietary guidelines (FBDG) — a global summary:

'Dietary guidelines' constitute a concise messaging format for conveying food and nutrition guidance to the public and to other audiences. Specifically, FAO (Food and Agriculture Organization of the United Nations) defines *Food Based Dietary Guidelines* (FBDG) as "short, science-based, positive messages on healthy eating and lifestyles aimed at preventing all forms of malnutrition and keeping people well nourished and healthy. They embody national nutrition recommendations and express the principles of nutrition education in terms of food".³

Germany has published its [Dietary Guidelines](#) since 1956.⁴ The United States has issued [Dietary Guidelines for Americans](#) every 5 years since 1980.⁵ Similar guidelines have been issued worldwide over this period, particularly after FAO and the World Health Organization promoted the concept of *Food Based Dietary Guidelines* (FBDG) following the 1992 International Conference on Nutrition.⁶ While FBDG increasingly focus on diets, they still emphasize nutrients, foods and food groups. But they can go beyond this, for example, by addressing traditional foods, dishes and cuisines.⁷ More than 100 countries have issued such guidelines and FAO recently published a [compilation](#) of 67 of them.⁸ In 2012, Tufts GSDWG compiled 51 FBDG and categorized them by content diversity. Our results illustrate the relative homogeneity of such guidance, emphasizing nutrition-based personal health and wellbeing (although the variations are fairly diverse across countries).⁹

Beyond "nutritionally adequate, safe and healthy", most FBDG core messages do not address public health concerns linked to broader social, economic and environmental influences on diets or on the overall food supply. Some mention social aspects of eating (e.g.; [Japan & Brazil](#)), and highly processed foods ([Brazil](#)).¹⁰ Japan also encourages local food products and ingredients in season, dietary competencies, and reduced food waste. But none of the concise FBDG recommendations from these and other countries actually invokes the term 'sustainability'.

FBDG supporting documents: FBDG typically include more detailed support documentation that elaborates on the background development, scope or content, and /or applications for the more succinct guidelines. FBDG sustainability themes associated with broader social and physical environmental concerns have been published by a few countries in their fuller FBDG publications, in separate food guides, or in background reports. Examples include the following:

- Brazil's 2014 [Dietary Guidelines for the Brazilian Population](#) encourage and elaborate on "diets that are nutritionally balanced, delicious, culturally appropriate, and supportive of socially and environmentally sustainable food systems".¹¹

- The 2013 [Eat for Health — Australian Dietary Guidelines](#) full report describes sustainable dietary patterns, with recommendations that focus on reducing food waste and conserving resources, with a detailed appendix “Food, Nutrition and Environmental Sustainability”.¹²
- The recently released 2015 U.S. Dietary Guidelines Advisory Committee (DGAC) [Advisory Report](#) that precedes the issuance of the 2015 guidelines addresses environmental sustainability and long-term food security for the first time.¹³ It emphasizes the benefits of diets higher in plant-based foods and with reduced meat consumption. It also addresses concerns for the long-term supply and safety of seafood. The section on sustainability is detailed and strongly evidence-based.

Government-supported sustainable dietary guidelines other than

FBDG: While all of the following countries have issued their own FBDG, a few government-supported bodies (particularly European-based) have also produced what qualify as sustainable dietary guidelines. Among these are the following:

- In 2009, **Sweden's National Food Administration**, in concert with the Swedish Environmental Protection Agency, issued *Environmentally Effective Food Choices*, focusing in particular on reduced climate impact, non-toxic environments, and biodiversity, but they were rejected as a proposal to the full EU. Sweden's *livsmedelsverket* currently publishes [Food and Environment](#) dietary guidelines.¹⁴
- The U.K. government-supported **Sustainable Development Commission**, which closed in 2011, was its independent adviser on sustainable development. It developed [Setting the Table](#), with 8 key recommendations covering sustainable diets and food systems.¹⁵
- **Health Council of the Netherlands**, an independent scientific advisory body for government and parliament, in 2011 issued [Guidelines For A Healthy Diet: The Ecological Perspective](#). It emphasizes a shift towards a less animal-based, more plant-based diet; sustainable fisheries; and reduced food waste.¹⁶
- The 2012 [Nordic Nutrition Recommendations](#) from **The Nordic Council of Ministers** (representing five countries) discuss the environmental benefits of sustainable diets. The [New Nordic Kitchen Manifesto](#) emphasizes food preparation including “raw materials which characteristics are especially excellent in our climate, landscape” and “welfare of the animals and a sound production in the sea and in the cultivated as well as wild landscapes”.¹⁷
- In 2014, the German Council for Sustainable Development issued [The Sustainable Shopping Basket](#) that included food choices among a list of sustainable consumption recommendations.¹⁸

Non-governmental sustainable dietary guidelines: Non-governmental organizations (NGOs), industry groups, and academia have produced the preponderance of sustainable dietary guidelines in the U.S. and Europe in particular. While ‘guidelines’ are typically the term applied to concise dietary or sustainability recommendations, other guidance-related typologies are used. These include the [Milan Protocol](#), [Roots of Change Declaration for a Healthy Food and Agriculture](#), and Harvard and the Culinary Institute of America’s [Menus of Change Principles](#).

Tufts GSDWG has compiled many such examples, including the aforementioned government-supported sustainability guidelines (excluding FBDG). In [this table](#), hundreds of specific recommendations from 28 entities are aggregated into 16 sustainability categories.¹⁹ In terms of the aggregate numbers of issues covered, the majority addressed between 2 and 9 of the 16 topic areas, indicating a preference to emphasize a few salient concerns while not addressing many others. The most referenced categories are ‘healthy diets’ [25 of 28], ‘sustainability labels’ [23 of 28], ‘animal products’ [22 of 28], ‘food waste’ [21 of 28] and ‘local foods / food systems’ [20 of 28].

The general quality of 33 sets of such recommendations was also assessed. Most NGO guidelines in particular were rather deficient in terms of focus, complexity, and quality of scientific evidence. In [this analysis](#), only three guideline sets were rated as ‘very strong’ and another seven ‘fairly strong’ in terms of evidence.²⁰ FBDG standards, by comparison, require a very strong evidence base. Furthermore, clearly articulated sustainability principles were often limited or altogether lacking. Such principles or equivalent value statements are important because they provide underlying philosophical and scientific justifications for the recommendations issued.

Single-topic sustainable dietary guidelines: Some sustainability guidelines focus on just one aspect — typically a single food category — rather than on a broader spectrum of foods or sustainability concerns. They are issued mainly by NGOs and business organizations. Environmental Working Group’s [Meat Eater’s Guide](#) is one example.²¹ Fair trade guidelines are another. Most notable are [sustainable seafood guidelines](#)²² issued by a large number of independent advocacy groups and industry-led associations in many countries (see below).

Synopsis: Dietary guidelines addressing sustainability have been produced by multiple governmental and non-governmental bodies; some have generated more substantive and credible guidance than others. All entities could play an important role in future guidance efforts to promote sustainable diets and food systems. In addition, while the above categories focus on guidelines, sustainable dietary advice in other formats is proffered in countless books, journal articles, and via social and audiovisual media. Those from intergovernmental organizations such as FAO address

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sustainable dietary guidance in detail, as in [Sustainable Diets and Biodiversity](#).³ The recommendations provided throughout this and similar reports do not constitute 'guidelines' per se, but they can certainly influence both the issuance and the content of dietary guidelines, including FBDG.

SUSTAINABLE DIETS AND DIETARY GUIDANCE

What are sustainable diets? The case for connecting sustainability to diets goes back a long way, but the connection to dietary guidelines per se was made by Joan Gussow and Kate Clancy, who coined the phrase 'sustainable diets' in their 1986 journal article *Dietary Guidelines for Sustainability*.²³ Use of this term and conceptual approach has proliferated more recently, particularly since FAO's 2009 session on Sustainable Diets and Biodiversity and its eponymous publication in 2010.³ In it, sustainable diets were defined as "those diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally appropriate, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources". FAO has also adopted it as the rubric under which it is focusing much of its food and agriculture policy work.

In 2013, the U.S.-based Institute of Medicine hosted a meeting titled [Sustainable Diets: Food for Healthy People and a Healthy Planet](#) — a Food Forum that included Kate Clancy and two others from the Tufts GSDWG (Christian Peters and Parke Wilde) as presenters.²⁴ [IPES-FOOD](#) — an independent international panel of experts on sustainable food systems and diets was established in 2014.²⁵ Other proponents of sustainable diets include DEFRA (England), the Academy of Nutrition and Dietetics (U.S.), and the American Public Health Association. The International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) has promoted the Mediterranean Diet as a model.²⁶ The European Parliament has established a [Cross-Party Sustainable Food Steering Group](#) that is promoting sustainable diets. The UN's post-2015 Sustainable Development Goals may incorporate sustainable dietary guidance, which would bolster their visibility on a global scale.

'Sustainable diets' are more multifaceted and complex relative to FBDG for several reasons: First, the notion of 'diets' keeps expanding. Dietary practices are shaped by food access and eating environments — food security, social capital, marketing influences, demographics, and other drivers of food access and utilization. Many of Brazil's recent FBDG focus on eating practices and food processing versus nutrients or foods per se. Food competencies; e.g., food and nutrition education and cooking skills,

can also be factored in. Sustainability can be part of all these elements (as can dietary guidance more broadly).

Secondly, sustainability itself is inherently multidimensional — ideally integrating various environmental, social, economic, cultural and other facets where food intersects with people and the planet. These elements are inter-related, and understanding all the issues and relationships is challenging even to experts. Because ‘sustainable diets’ and ‘sustainable food systems’ are emerging fields, associated guidance needs to stay current and evolve with it.

Thirdly, beyond the evidence-based health promotion and disease prevention framework that forms the basis for FBDG, sustainability invokes a broader philosophy — a world-view with a vision for a different future. As such, multiple and diverse values and principles drive priorities, and some can be contradictory. For example, paying more for sustainably-produced foods may conflict with food security objectives. Some aspects can foment controversy, such as animal welfare or animal rights principles. The ‘right to food’ and food justice principles are similarly debated in many countries. Furthermore, sustainability invokes development principles and governance dimensions (such as transparency and democratic processes), and not simply end results.

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ADDRESSING SOME CHALLENGES TO DEVELOPING SUSTAINABLE DIETARY GUIDANCE

Dietary guidance, public health policy, and sustainable diets: FBDG flow from a fairly narrow public health framework, focusing mainly on personal wellbeing tied to the consumption of nutritious diets. It is not clear why some national governments have deferred to other bodies to generate sustainable dietary recommendations in deference to using FBDG. Constraints in some countries emerge from political pressures. But there is also conceptual resistance to broader paradigms that redefine health through a more systemic and ecological public health lens.

Adequate responses to emerging issues related to food systems sustainability call for broader public health and food security models to provide an adequate and enduring food supply for all people within a resilient environment. More specifically: “Human health cannot be considered in isolation. It depends highly on the quality of the environment in which people live: for people to be healthy, they need healthy environments”.²⁷ Rayners and Lang proffer an *Ecological Public Health* framework: “We see the value of ecological thinking for public health as a reminder that the health of the public is contingent upon other life forms and connections with multiple other factors”.²⁸ They delineate four more-constrained public health models wherein the FBDG approach fits. Their [ecological public health construct](#) encapsulates and builds on

these.²⁸ A 'sustainable diets' approach evokes this integrated notion and can constitute a conceptual bridge that links dietary guidance to these more complex and systemic public health frames.

Sustainable dietary guidance is multi-disciplinary and systems-based:

Sustainability's many dimensions also makes it a multi-disciplinary subject, requiring expertise across a broad knowledge base beyond the more defined food and nutrition subjects germane to understanding FBDG. Systems-based modeling approaches that integrate social, environmental, cultural and economic parameters are just emerging in the literature. For example, tools for systems thinking have only recently been applied to complex, multi-factorial problems such as obesity,²⁸ and similarly to food systems (see: [A Framework for Assessing Effects of the Food System](#) from the IOM).³⁰ This suggests that a wide range of expertise beyond food and nutrition is needed to frame the issues and produce sound guidance on diverse issues. While this challenges professionals in specialized fields to broaden their perspectives, it can also promote multi-disciplinary teamwork that, in turn, can broaden spheres of influence for dietary guidance work.

More data are needed: Some of the better quantitative tools such as Life Cycle Assessments provide very practical information to guide sustainable food choices. Currently, such "foodprint" data are limited, but this research is accelerating and is influencing guidance on consumption of animal foods, on food processing, and on use of energy and other resources, particularly in the food industry where operational efficiencies also influence costs. Alternatively, social concerns that address food justice (e.g. inequality and labor conditions) tend to be more divisive issues, but fairer pay and fair trade themes are increasingly moving to the forefront of food systems-related social action. A result should be greater incorporation of these factors into sustainable dietary guidance. In all instances, claims should be justified with reasonable evidence of efficacy.

Scale is critical: Sustainable dietary guidance recommendations often challenge the national scale of FBDG as well as their relative homogeneity. Sustainability concerns in one country may not only be inappropriate for others, but also work at cross-purposes. At one end, local food systems initiatives that have energized so many sustainability advocates may only have relevance at that geographic scale.³¹ At the other extreme, meeting nutritional goals for citizens in richer countries can have adverse consequences on the food security of populations in poorer nations where the foods may be derived.³² Local, regional, national, and global systems are embedded and as such are best addressed across these multiple geographic dimensions.³³ Some of these issues are also addressed in the aforementioned IOM report.³⁰

Sustainability concerns in one country may not only be inappropriate for others, but also work at cross-purposes.

Influencing food choices made by consumers and food chain players:

Sustainability produces yet another set of considerations that consumers are being asked to incorporate into dietary decision-making that may already include taste preferences, food access, preparation skills, health concerns, and family demands. Similarly, supply constraints and established menus and business practices drive institutional food service and restaurant decisions, wherein routinization is a barrier to changing menus and food preparation practices.³⁴ Guidance needs accommodate expectations for the pace of change and expected impacts these may have on citizenry because of these realities.

In a more balanced playing field for the exchange of ideas, dietary guidance would contribute much more to an informed populace, wherein such messages could offset undue industry-based influences. This is currently not the case in the U.S., where the inclusion of sustainability recommendations in the 2015 Dietary Guidelines Advisory Committee report has elicited intense criticism by commercial interests because they fear a loss of business.³⁵ In turn, members of Congress are putting strong pressure on the Department of Health and Human Services (HHS) and U.S. Department of Agriculture (USDA) to not address sustainability in the subsequent Guidelines, contending that there is no connection of these issues to nutrition and health.³⁶ As a result, which, if any, of the DGAC sustainability recommendations will make it into the forthcoming 2015 Dietary Guidelines for Americans is uncertain. As with the other examples cited above, this matters considerably because the concise FBDG guidelines — and not the more detailed support materials — are the 'headline' messages that most often reach the public and drive consumer-oriented [food guides](#), including Plates and Pyramids.

Producing credible dietary guidance is integral to making progress on sustainable diets.

THE POTENTIAL AND THE OPTIONS TO PROMOTE SUSTAINABLE DIETARY GUIDANCE

Providing sound advice: A rapidly growing share of consumers and food businesses are adopting food-related sustainability practices. But beyond the 'eco-minded' consumers',³⁷ change is more gradual and needs encouragement. A plethora of 'green' dietary advice is available; some guidance is excellent, but other advice is somewhat superficial, unsubstantiated, or simply industry-driven 'greenwashing'.³⁸

Producing credible dietary guidance is integral to making progress on sustainable diets. Audiences for dietary guidance need to be sufficiently informed to understand and apply recommendations. FBDG are increasingly used by food sector professionals to shape meal programs, for diet planning, and to some extent to influence the make-up of the food supply. This list of [Pyramids and MyPlates](#) assembled by Tufts GSDWG illustrates designed to convey the guidelines to the public in a consumer-friendly manner.³⁹ In contrast, most of the sustainable dietary guidelines

examined are directed primarily to the public, and accompanying explanatory literature is often substandard in its formulation and quality.²⁰

How best to incorporate sustainability into guidelines: As discussed above, dietary guidance for sustainability can be much more complex than for FBDG. It is thus more difficult to develop uniform standards and to formulate fixed sets of guidance akin to FBDG. This [food systems map](#) illustrates one of the best-developed and integrated food systems graphics, yet clearly it is not designed for most audiences that guidelines try to reach.⁴⁰ A process is needed to better delineate what sustainability elements among many — such as climate change, biodiversity, food waste, water use, and food justice — ought to be incorporated and prioritized, and in a manner that makes this information accessible to diverse audiences. To achieve this, better-developed guidance support materials are needed for professionals (e.g., dietitians, environmentalists, health professionals) interested in these issues, and who, in turn, will apply them to the development of better-formulated consumer and practitioner recommendations.

Existing sustainable dietary guidelines focus mostly on food choices and practices that suggest multiple sustainability benefits (e.g., eat less meat; buy organic foods; select sustainable seafood). But sustainability priorities such as biodiversity, climate change, food security, food justice, and sustainable agriculture don't always translate easily into specific dietary guidance, and are often absent in the narratives that accompany such guidelines. How best to incorporate these components will be an important priority with respect to the structure and content of such guidelines going forward. In other words, how to construct sustainable dietary guidelines needs careful consideration to address multiple issues in an integrated manner.⁴¹

At a practical level, professionals, practitioners, and the public can likely work with just a few sustainability issues at a time, and thus priority-setting is a critical aspect of this work. It also suggests that a single (one size fits all) guidance approach, akin to FBDG, is not the preferred guidance product. Rather, a flexible or adaptive approach is more pragmatic — one that accommodates the immense differences in diets and eating environments, as well as varying sustainability priorities that would be expected among consumers, food industry and policy makers within and between different nations.

Tracking the effectiveness of dietary guidance: The 'big picture' impacts of FBDG are uncertain, given the parallel rise in global obesity and diet-related chronic diseases since their issuance. Overall, a very small share of any country's population actually meets its nation's dietary guidelines. This is not surprising given the overwhelming influences of food industry promotional messaging, the proliferation of unhealthy foods in the marketplace, and many ingrained habits amongst consumers. Similarly,

Sustainability priorities such as biodiversity, climate change, food security, food justice, and sustainable agriculture don't always translate easily into specific dietary guidance. Priority-setting is a critical aspect of this work.

evidence is lacking as to the influence of multi-component sustainable dietary guidelines in the global movement towards more sustainable diets and food systems, given the plethora of other communications and advocacy efforts in this realm. Thus going forward, it is important that the outcomes and impacts of sustainable dietary guidance be tracked to the extent possible, so as to engender support for it as an effective strategy for positive change. Measurable results are often most easily assessed in the settings and amongst the audiences where such guidance is targeted.

Sustainable seafood guidance: Sustainable seafood guidance is a possible model for successful guidance dissemination. Dozens of organizations have developed such guidance to help protect the long-term sustainability of global seafood supplies and the fisheries that are critical to the food security and livelihoods of literally billions of people worldwide. Many incorporate certification programs and labeling schemes that target wholesalers, retailers and consumers as to what fish to buy and consume. A [partial list of these](#) is enclosed.²²

Tufts GSDWG has begun to examine available evidence of their effectiveness. Preliminary findings suggest that such guidance, especially as part of comprehensive advocacy and promotional efforts, can be tracked and that these seafood guidelines can be shown to be influential to both supply chain and consumer decision-making.⁴² Large supermarket chains, for example, have used several of the most influential seafood sustainability programs to shape their policies. Tens of millions of seafood consumers have received buying guides and related materials and messages from advocates. Given that conditions globally for seafood stocks remain in crisis,⁴³ these campaigns have to become more coordinated and be more accurate about supply conditions.⁴⁴ They also need to better track their outcomes. But overall, as guidance programs they offer promising strategies to address retailing practices in other major food system sectors as well as consumer food choices. They can also be drivers of governmental policies; for example, by generating support for national and international agreements to protect oceans and fisheries. In terms of FBDG, seafood was one of the two sustainability topics addressed by the U.S. 2015 Dietary Guidelines Advisory Committee.¹³

Seafood guidance is a model that focuses on a single food category and is one that enjoys wide public and business support in most countries. Still, while acknowledging likely industry sector opposition, it could be considered for other food groups such as meat, where the evidence for dietary impacts on the environment is strong. Support for sustainably-produced fruits and vegetables is also rapidly expanding. This model also suggests that sustainable dietary guidance can (and ought to) emerge from multiple public and private sources (governments, businesses, NGOs and consumers) as a potent strategy to advance sustainable diets. Once issued,

tracking the roles that advocacy groups and practitioners play in applying them is one way by which their influence can be seen and measured.

As noted, developing guidance from more integrated sustainability perspectives is more complex insofar as it is intended to show how overall diets can influence multiple factors such as climate change, biodiversity, food production and food justice. However, [fair trade](#) initiatives represent one approach to address these inter-connected issues that is also having an impact on both the supply chain and consumer choices for selected food products (see enclosed list).⁴⁵

A SUSTAINABLE DIETARY GUIDANCE FRAMEWORK

The Tufts *Guidelines for Sustainable Diets* Working Group (GSDWG) was formed in late 2012 with the intent of producing a comprehensive set of sustainable dietary guidelines. That initial objective was deferred once it became clear that tools and strategies to guide such a process were limited. Instead, the focus became the development of a sustainable dietary guidance framework to help sort out issues such as those described in this paper. This reflects Tim Lang's admission that "Methodologies, models and indicators are emerging from academia, agencies and industry but need to be brought into a coherent framework, and move from informal to formal processes of policy definition".⁴⁶ Also influencing this transition was determining that the group's priority is primarily to enable others to develop sound guidance, rather than developing and promoting a single set of guidelines that invariably would not suit all audiences or geographies.

GSD framework objectives: Currently, too much sustainable dietary guidance is developed without the background and rigor that could make it more authoritative and influential. The broad intent of a GSD framework is to address the deficiency of decent guidance resources for professionals, practitioners and policy-makers, and to enable them to generate sound advice for the public and for others such as the media and food businesses.

What is a 'Guidance for Sustainable Diets' (GSD) applied framework?

Frameworks have become increasingly valuable tools for making progress on concept development, assessments, and messaging in many fields. They provide direction for the design, structure and content needed to properly develop products or services, akin to using architects to design buildings. They are especially valuable where multi-disciplinary, systems-based approaches are called for.

A GSD framework can be an enabler for diverse types of sustainable dietary guidance development. As an *applied* methodology, it is intended to support processes that encourage action; i.e., changes in policies and practices — a systems change model. Such an approach provides

direction — procedures and pathways for guidance developers to envision, design, produce and convey sustainable dietary messaging in a professional, credible and scientific manner. It will delineate a sequence of development steps that typically could include setting objectives, determining audiences, sourcing expertise, assessing evidence (research and other models), producing content, and carrying out dissemination / promotion to targeted audiences. Specifically, a framework approach can help these entities to:

- Gather and process information to aid intelligent decision-making, determine worthwhile strategies and activities, and weigh alternative approaches. This is particularly important where measurable outcomes are expected;
- Incorporate the requisite steps to carry out guidance development in a professional and well-considered manner;
- Better understand the complex and integrated aspects of sustainability as they apply this to food systems and to the changes being proposed through their guidance tools;
- Integrate their visions or philosophies, core values and beliefs, and develop underlying principles as building blocks to shape and prioritize their guidance products;
- Determine who should be involved in their guidance development — what expertise is needed and the roles participants or partners can play.

GSD framework targets or audiences can be numerous and diverse, and include:

- NGOs and professionals involved in nutrition, public health, environment, and sustainability advocacy
- policymakers, including those formulating FBDG or sustainable diets recommendations
- program planners and regulators
- businesses and/or trade groups
- funders
- think tanks
- media
- scientific communities
- institutions (e.g., food service) and
- the public at large.

How a GSD framework would be used: The intent is to work with varying constituencies — either as end users or as intermediaries — to help them design, develop / refine, and deliver guidance to their audiences. This can be provided as toolkits or similar guidance materials, via conferences or workshops, or through direct consulting services. A GSD framework

“training of trainers” program could enable others to provide these services, especially as intermediaries providing expertise to other users with less expertise or capacity to carry out the development steps. A think tank or similar mechanism could also be developed to promote more research and broad-based communications of guidance resources or resulting products.

To serve such a diverse user base, a GSD framework cannot simply adopt a generic or ‘one size fit all’ approach. Audiences will have varying levels of expertise, capacities (time, cost, effort) and resources. Some will want simplified, straightforward content, others may want to invest in a more structured process involving planning, research, implementation strategies, policy development, and/or evaluation. As noted, the priorities will also vary geographically, particularly across countries with considerably different food systems. It is envisioned that the application of such a framework will be limited initially and gradually expand.

The GSD framework is intended to build on existing resources, including related frameworks.⁴⁷ It can facilitate access to, and assessment of other literature - reports, proposals, guidance, and policies - in terms of scope, accuracy, purposes, and philosophies. As warranted, it can incorporate proven education, behavior change, and social change models and adapt guidance to specific audiences and/or geographic settings. Similarly, it can help users develop tracking and evaluation tools to assess their resulting guidance outcomes, reflecting strategies employed in parallel fields or subjects.

RECOMMENDATION FOR FUNDERS

Rapidly growing global interest and involvement in food systems sustainability makes this an opportune time to develop and promote pertinent guidance, and the increasing urgency to address climate change, biodiversity, and long-term food security accelerates its relevance. A ‘sustainable diets’ model is dynamic because not everyone is directly engaged in the food sector, but all people eat and can thus ‘vote with their forks’.⁴⁸

A comprehensive strategy for developing and promoting sustainable dietary guidance would include scoping existing efforts, identifying opportunities, and establishing priorities to target such guidance to multiple audiences. It would support development of high quality guidance by interested parties and best practices to disseminate / promote them for maximum effect. Facets of this agenda that funders could consider supporting include the following:

A. Facilitate development of sustainable dietary guidance:

- **Review existing initiatives for effective guidance:** Besides seafood, good quality guidance work is focusing on other food categories (e.g. meat and dairy consumption) and integrated into food systems models (e.g. supply chain efficiencies, fair trade, food justice, regional diets (e.g. Mediterranean), water access, agro-ecology, food waste, urban food systems). These all directly or indirectly have generated dietary guidance and researchers, advocates and others would benefit from efforts to compile them, to assess their scope, quality, and applications, and to derive 'best practices' and 'lessons learned'. Scoping papers akin to this one are one approach to undertaking this work, albeit involving more research.
- **Assess interest in sustainable dietary guidance development:** Broadly speaking, public support for healthier and more ecologically-driven diets is growing.⁴⁹ In tandem, overall interest in, and demand for well-formulated guidance should be surveyed to help prioritize audiences and types of guidance products. This process could also assess what assistance (resources, expertise) interested users need to develop and disseminate such guidance. It is important to address opportunities not just in industrialized countries but also in LMICs (low and middle income countries) where conditions, priorities, and subsequent guidance could differ considerably from that produced, say, for Europe and North America.
- **Support capacity building:** Tim Lang contends, "The clarification of sustainable diets is now a frontline policy issue".⁴⁶ Sustainable dietary guidance work lacks the support structures long embedded in FBDG development.⁵⁰ As of now, aggregate content, procedures, and outreach-related tools and methodologies are insufficient to enable sustainable dietary guidance to proliferate expeditiously. Capacity-building resources will facilitate well-produced guidance. Whether through a GSD framework development approach as outlined above, and/or by other means, this 'weakest link' needs considerable strengthening.
- **Encourage promotion and adoption of such guidance:** Guidance is not meant to sit on shelves collecting dust. Wider dissemination via outreach and promotion will generate more awareness of resources and greater utilization among diverse audiences. Best practices in related food, nutrition, and environmental fields can be compiled, examined, and applied to this work.
- **Tracking and evaluation:** Whenever possible, the results of sustainable dietary guidance efforts should be measured. Again, tools and strategies in parallel fields can be reviewed to identify cost-effective approaches to incorporate into these efforts.

It is important to address opportunities not just in industrialized countries but also in LMICs (low and middle income countries) where conditions, priorities, and subsequent guidance could differ considerably from that produced, say, for Europe and North America.

B. Build support for and interest in sustainable dietary guidance:

Funders: Foundations and other grant makers can communicate the relevance and potential role of sustainable diets and associated guidance to other funders, and educate them as to the fine points of the work — who and what is involved in their development, where they are used, and potential audiences. This could be achieved via meeting presentations or more involved workshops at funder meetings, as well as through funder-focused publications or other communications pathways. Similarly, guidance advocates could keep interested funders more apprised of relevant meetings they could attend.

- **Other audiences:** Use similar strategies to communicate the relevance of sustainable dietary guidance to a wider user base. Environmental groups in particular could do much more to incorporate sustainable food systems into their policy work, and sustainable dietary guidance is a good mechanism to enable these connections.
- **Guidance developers:** Support for more networking among entities engaged in guidance development could be invaluable to encourage sharing of resources, experiences and strategies, and to better coordinate efforts via a 'Community of Practice'.

C. Consider the politics of FBDG and similar dietary guidance policy:

The perceived strengths of FBDG are their legitimacy and authority, and hence they are good targets for sustainability guidance. But in the U.S., it was almost three decades after the Gussow and Clancy article²³ before the US Dietary Guidelines Advisory Committee (DGAC) seriously addressed sustainability in their 2015 report, and there is little progress on this elsewhere. One reason why governments may be slow to integrate sustainability content is the absence of significant advocacy efforts, particular in the face of opposition such as that described above.

- To offset these oppositional influences, there needs to be broader support and funding for campaigns to have sustainability included in FBDG. For example, at the March 2015 US DGAC public meeting, Friends of the Earth brought a petition "reflecting the voices of more than 120,000 individuals ... supporting the Expert Panel's call for a diet with more plant based foods and fewer animal products for the sake of public health and the environment."⁵¹ This clearly demonstrates public support for the inclusion of sustainability in these guidelines. That same day, a new campaign called '*My Plate My Planet*' published full-page advertisements in national US newspapers featuring more than 100 prominent organizations and individuals supporting sustainability recommendations in the 2015 Dietary Guidelines for Americans.⁵² This really marks the first time that professionals and their organizations in the U.S. have advocated strongly in support of dietary guidelines recommendations.

Funders who support advocacy initiatives could work with NGOs and professional bodies in countries with the greatest potential to influence inclusion of sustainability into FBDG and other guidance.

- Funders who support advocacy initiatives could work with NGOs and professional bodies in countries with the greatest potential to influence inclusion of sustainability into FBDG and other guidance. As opposed to 'after-the-fact' initiatives, interest groups or coalitions could be encouraged to generate innovative strategies that would build momentum over years and thus influence the FBDG development process from the onset. They could advocate for including experts in sustainability into the scientific bodies that help formulate the guidelines. In tandem, they could promote changes in FBDG conceptual frameworks to incorporate ecological public health approaches and long-term food security as integral standards for intended outcomes.
- Funders could also support incorporation of sustainable diets into broader food policy work. For example, LiveWell for LIFE recently released [On Our Plate Today: Healthy, Sustainable Food Choices](#) that lists eight "policies and private initiatives which could make sustainable diets happen in the EU". The first one is to "Revise national dietary guidelines to reflect sustainability...". Others address 'bigger picture' sustainability-related policies that need to develop along side, such that sustainable diets (and associated guidance policies) constitute pathways to promote sustainable food systems and global sustainability ('Healthy People. Healthy Planet').⁵³

ENDNOTES AND REFERENCES

- 1 Currently, the Guidance for Sustainable Diets Working Group (GSDWG) comprises five Tufts faculty, including Hugh Joseph (the P.I.), Kate Clancy, Julian Agyeman, Timothy Griffin, and Christian Peters. We also acknowledge and appreciate the contributions of graduate students Chelsea Clarke, Dianna Bartone, Danielle NGO, Kate Hebel, and Kathleen Eustler in preparing items provided via web links in this paper.

The GSDWG is in the initial planning stage of a three-phase, multi-year endeavor. The authors acknowledge that this paper has somewhat of a U.S. emphasis in part because the group has put considerable effort in 2013 and 2014 into supporting the inclusion of sustainability content in the 2015 Dietary Guidelines for Americans. (A Tufts faculty member, Miriam Nelson, headed up the Dietary Guidelines Advisory Committee working group "Environmental Determinants of Food, Diet, and Health" and Timothy Griffin was a Special Advisor to that working group).
- 2 Principles of A Healthy, Sustainable Food System. Academy of Nutrition and Dietetics (formerly American Dietetics Association), American Nurses Association, American Planning Association, and American Public Health Association. 2010. https://www.planning.org/nationalcenters/health/pdf/HealthySustainableFoodSystemPrinciples_2012May.pdf
- 3 Barbara Burlingame & Sandro Dernini. Sustainable Diets and Biodiversity. Directions And Solutions For Policy, Research And Action. Food and Agriculture Organization of the United Nations. 2010. <http://www.fao.org/docrep/016/i3022e/i3022e.pdf>
- 4 Food-based dietary guidelines – Germany: FAO. 2014. <http://www.fao.org/nutrition/education/food-dietaryguidelines/regions/countries/germany/en>

3 DIETARY GUIDELINES AND SUSTAINABLE DIETS: PATHWAYS TO PROGRESS

- 5 Dietary Guidelines for Americans. 2010. Department of Health and Human Services and U.S. Department of Agriculture. <http://www.health.gov/dietaryguidelines/dga2010/dietaryguidelines2010.pdf>
- 6 Food-Based Dietary Guidelines in Europe. EUFIC Review 10/2009. <http://www.eufic.org/article/en/expid/food-based-dietary-guidelines-in-europe/>
- 7 Ibid. <http://www.eufic.org/article/en/expid/food-based-dietary-guidelines-in-europe/>
- 8 Food-based dietary guidelines. FAO. 2014. <http://www.fao.org/nutrition/nutrition-education/food-dietary-guidelines/en>
- 9 Kate Hebel. Global Food Based Dietary Guidelines Comparison. Guidance for Sustainable Diets Working Group. Tufts University. Boston, MA. 2012. <https://tufts.box.com/Dietary-Guidelines>
- 10 Japan's Dietary Guidelines. Japan Dietetic Association. <http://www.dietitian.or.jp/english/newsletter/jpndiet.html>
Food-based dietary guidelines – Brazil. FAO. 2014. <http://www.fao.org/nutrition/education/food-dietary-guidelines/regions/brazil/en>
- 11 Dietary Guidelines for the Brazilian Population. Brazil Ministry of Health. 2014. http://nupensusp.wix.com/nupens#!__english
- 12 Australian Dietary Guidelines. Canberra: National Health and Medical Research Council. National Health and Medical Research Council. 2013. <http://www.eatforhealth.gov.au>
- 13 Scientific Report of the 2015 Dietary Guidelines Advisory Committee. Part D. Chapter 5: Food Sustainability and Safety. U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA). 2015. <http://www.health.gov/dietaryguidelines/2015-scientific-report/PDFs/10-Part-D-Chapter-5.pdf>
- 14 National Food Administration and Swedish Environmental Protection Agency. Environmentally Effective Food Choices. 2009. Food and Environment dietary guidelines. Livsmedelsverket. <http://www.livsmedelsverket.se/en/food-habits-health-and-environment/food-and-environment/>
- 15 U.K. Sustainable Development Commission. Setting the Table. Advice to Government on priority elements of sustainable diets. 2009. http://www.sd-commission.org.uk/data/files/publications/Setting_the_Table.pdf
- 16 Health Council of the Netherlands. Guidelines for a Healthy Diet: The Ecological Perspective. The Hague: Health Council of the Netherlands, 2011. <http://www.gr.nl/sites/default/files/201108E.pdf>
- 17 Nordic Nutrition Recommendations. 2012. <http://www.norden.org/en/theme/tidligere-temaer/themes-2014/nordic-nutrition-recommendation/nordic-nutrition-recommendations-2012>
The Nordic Council of Ministers. The New Nordic Kitchen Manifesto. <http://newnordicfood.org/about-nnf-ii/new-nordic-kitchen-manifesto>
- 18 German Council for Sustainable Development. The Sustainable Shopping Basket – A Guide to Better Shopping. 2014. <http://www.nachhaltigkeitsrat.de/en/projects/projects-of-the-council/nachhaltiger-warenkorb>
- 19 Chelsea Clarke. Sustainable Dietary Guidance Comparison. Guidance for Sustainable Diets Working Group. Tufts University. Boston. 2015. <https://tufts.box.com/GSD-Comparison>
- 20 Dianna Bartone. Sustainable Dietary Guidelines: On What Ground? To what extent are the recommendations supported by evidence? Guidance for Sustainable Diets Working Group. Tufts University. Boston, MA. 2015. <https://tufts.box.com/Evidence-Evaluation>
- 21 Environmental Working Group. Meat Eater's Guide to Climate Change and Health. 2011. <http://www.ewg.org/meateatersguide/helpful-tips-for-meat-eaters>

3 DIETARY GUIDELINES AND SUSTAINABLE DIETS: PATHWAYS TO PROGRESS

- 22 Chelsea Clarke. Seafood Certifications and Guides. Guidance for Sustainable Diets Working Group. Tufts University. Boston, MA. 2015. <https://tufts.box.com/Seafood-Cert-Guides>
- 23 Joan Gusso and Kate Clancy. Dietary Guidelines for Sustainability. Journal of Nutrition Education. Feb. 1986.
- 24 Sustainable Diets: Food for Healthy People and a Healthy Planet: Workshop Summary. Institute of Medicine. Washington, D.C. (2014). <http://www.iom.edu/Reports/2014/Sustainable-Diets-Food-for-Healthy-People-and-a-Healthy-Planet.aspx>
- 25 International Panel of Experts on Sustainable Food System (IPES-food). Announced at the EAT Stockholm Food Forum 2014. <http://www.eatforum.org/highlight/eat-and-the-daniel-and-nina-carasso-foundation-join-efforts-to-promote-sustainable-food-systems-and-diets/>
- 26 International Center for Advanced Mediterranean Agronomic Studies. Towards the Development of Guidelines for Improving the Sustainability of Diets and Food Consumption Patterns in the Mediterranean Area. CIHEAM International Seminar, Session 1. Malta. September 2012.
- 27 Jean Lebel. Health - An Ecosystem Approach. International Development Research Centre. Ottawa, Canada. 2003.
- 28 Geof Rayner and Tim Lang. Ecological Public Health. Reshaping the Conditions for Good Health. Routledge. 2012. p. 92.
- 29 Tarek Hamid. Thinking in Circles About Obesity: Applying Systems Thinking to Weight Management. Springer. 2009.
- 30 Institute of Medicine. A Framework for Assessing Effects of the Food System. Washington, D.C. (Jan. 2015). <https://www.iom.edu/Reports/2015/Food-System.aspx>
- 31 Clancy, K. and Ruhf K. Is Local enough? Some arguments for regional food systems. Choices Magazine. 2015. <http://www.choicesmagazine.org/magazine/article.php?article=114>
Peters, C.J. et. al. Mapping potential food sheds in New York State: a spatial model for evaluating the capacity to localize food production. Renewable Agriculture and Food Systems: 24 (1); 72-84
- 32 Jenkins et al. Are dietary recommendations for the use of fish oils sustainable? <http://www.cmaj.ca/content/180/6/633.full>
Carolan, Michael S. Reclaiming Food Security. Earthscan Food and Agriculture. 2013. p.142.
- 33 Friedmann, H. Scaling-up: bringing public institutions and food service corporations into a project for a local sustainable food system in Ontario. Agriculture and Human Values, 24 (3), 2007. 389–398.
- 34 Amy Guptill and Jennifer L. Wilkins. Buying into the food system: Trends in food retailing in the US and implications for local foods. Agriculture and Human Values 19: 39–51, 2002.
Martinez, Steve W. The U.S. food marketing system: recent developments. 1997-2006. Economic research report (USDA, Economic Research Service) ; no. 42.
- 35 Allison Aubrey. Will The Dietary Guidelines Consider The Planet? The Fight Is On. National Public Radio. Feb. 26, 2015. <http://www.npr.org/blogs/thesalt/2015/02/26/389276051/will-the-dietary-guidelines-consider-the-planet-the-fight-is-on>
See also: Michael Hamm. U.S. Dietary Guidelines Report – What's the Fuss Over Sustainability? FCRN. March, 2015. <http://www.fcrn.org.uk/blog/michaelwhamm/us-dietary-guidelines-report-whats-fuss-over-sustainability>
- 36 Lawmakers urge USDA, HHS to use 'sound science' for Dietary Guidelines. <http://www.agri-pulse.com/Lawmakers-urge-USDA-HHS-to-use-sound-science-for-dietary-guidelines-03312015.asp>. See the full letter signed by the 71 lawmakers here: http://hagstromreport.com/2015news_files/2015_0305_republican-house-ag-leaders-letter-vilsack-burwell-dietary-guidelines.html

3 DIETARY GUIDELINES AND SUSTAINABLE DIETS: PATHWAYS TO PROGRESS

- 37 Francis Moore Lappe. *EcoMind: Changing the Way We Think, to Create the World We Want*. Nation Books. 2013.
- 38 Magnus Boström and Mikael Klintman. *The Green Political Food Consumer - A Critical Analysis of the Research And Policies*. Anthropology of Food. Sept. 2009.
- 39 Kate Hebel. *Dietary Food Pyramids, Plates, & Graphics*. Guidance for Sustainable Diets Working Group. Tufts University. Boston, MA. 2012. <https://tufts.app.box.com/FBDG-infographics>
- 40 Food Systems Map. Shift. 2009. <https://talkaboutfoodjb.files.wordpress.com/2013/11/food-systems-map-global.jpg?w=720>
- 41 Unni Kjærnes. *Sustainable Food Consumption. Some contemporary European issues*. The National Institute for Consumer Research (SIFO). Oslo. 2010. http://www.sifo.no/files/file76709_prosjektnotat_nr.1-2010-web.pdf
- 42 Whole Foods. *Greenpeace Ranks Whole Foods Market #1 for Seafood Sustainability*. <http://www.wholefoodsmarket.com/blog/greenpeace-ranks-whole-foods-market-1-seafood-sustainability>
Whole Foods. *Collaboration with the Marine Stewardship Council*. <http://www.wholefoodsmarket.com/missions-values/seafood-sustainability/our-collaboration-marine-stewardship-council>
Environmental Performance Index 2014. *Seafood Sustainability Indicators*. <http://epi.yale.edu/indicators-in-practice/seafood-sustainability-indicators>
- 43 Review of the state of the world marine fishery resources. Food and Agriculture Organization. *FAO Fisheries & Aquaculture Technical Paper 569*; 2011.
- 44 Graeme Parkes et. al. *Behind the Signs—A Global Review of Fish Sustainability Information Schemes*. *Reviews in Fisheries Science*, 18:4, 344-356, 2010.
- 45 Danielle Ngo. *Major Actors And Frameworks Of Fair Trade*. Guidance for Sustainable Diets Working Group. Tufts University. Boston, MA. 2014. <https://tufts.box.com/Fair-Trade>
- 46 Tim Lang. *Sustainable Diets: Hairshirts or a Better Food Future?* *Development*, 2014, 57(2), (240–256).
- 47 Relevant literature on this subject includes:
- Institute of Medicine. *A Framework for Assessing Effects of the Food System*. Washington, D.C. (Jan. 2015). <https://www.iom.edu/Reports/2015/Food-System.aspx>
 - *Framework for Assessing the Health, Environmental, and Social Effects of the Food System*. Institute of Medicine. Washington, D.C. (2013). <https://www.iom.edu/Activities/Nutrition/AssessingFoodSystem.aspx>
 - *Towards Sustainable Consumption: An Economic Conceptual Framework*. OECD. 2001
[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=env/epoc/wpnep\(2001\)12/final](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=env/epoc/wpnep(2001)12/final)
- 48 Marion Nestle. *Ethical Dilemmas In Choosing A Healthful Diet: Vote With Your Fork!* *Proc. Nutr. Soc.* 2000 Nov; 59 (4): 619-29.
- 49 For example: *Diners Prefer Meals That are Healthier and Better for the Environment*. <http://www.hartman-group.com/publications/reports/diners-changing-behaviors>
- 50 For example: Food and Agriculture Organization / World Health Organization of the United Nations. *Preparation and use of Food-Based Dietary Guidelines*. Report of a joint FAO/WHO consultation. Nicosia, Cyprus. WHO/NUT/ 96.6, 1996.
<http://www.fao.org/docrep/x0243e/x0243e00.HTM>

3 DIETARY GUIDELINES AND SUSTAINABLE DIETS: PATHWAYS TO PROGRESS

- 51 Friends of the Earth: Sign the petition: Support Seismic Shift in Food Policy.
http://action.foe.org/p/dia/action3/common/public/?action_KEY=17400
Also see Change.org petition: <https://www.change.org/p/secretaries-tom-vilsack-and-sylvia-burwell-departments-of-agriculture-and-health-and-human-services-resist-pressure-from-big-food-corporations-to-remove-sustainability-from-the-2015-dietary-guidelines-for-americans>
- 52 See: <http://myplatemyplanet.org>
- 53 Brigitte Alarcon and Erik Gerritsen. On Our Plate Today: Healthy, Sustainable Food Choices. LiveWell for LIFE – EU. 2014. Executive summary: http://livewellforlife.eu/wp-content/uploads/2014/12/Executive-Summary_English_FINAL.pdf
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IMPROVING THE WELL-BEING OF FOOD SYSTEM WORKERS

Molly Anderson, Ph.D.

Partridge Chair in Food and Sustainable Agriculture Systems,
College of the Atlantic, Maine, United States

Bama Athreya, Ph.D.

Senior Specialist, Labor and Employment Rights, United States Agency for
International Development (USAID)

EXECUTIVE SUMMARY

Workers are employed in low-wage and precarious positions in all food system activities, from input manufacture and distribution through waste management. Agriculture alone accounts for more than a third of the world's labor force, and is both the second largest source of employment worldwide and the most important sector for female employment in many countries. Although a framework of law, codes of conduct and principles or guidelines is in place to protect workers from abuses and violations of human rights, improving their working conditions and wages are especially problematic because of historical and current socioeconomic trends. In particular, the rise of informal or precarious employment in the food system with expansion of the corporate regime and neoliberal policies has exacerbated already poor conditions. The challenges of improving wages and working conditions must be addressed through several avenues at once, with particular attention to the most vulnerable workers: children, women and politically marginalized groups. Strategic areas for action and investment by funders include support for worker organizations and their collaborations with non-governmental organizations, other movements and researchers to document conditions and improve the capacity to organize across national and interest-area boundaries in resistance to corporate and industry violations. Support is also needed for workers' representation in regional and international standard-setting forums, for monitoring of compliance with agreements, for building capacity at the State level for stronger regulations and compliance with global norms, and for steps toward transformation of the neoliberal corporate model to better serve the public interest.

INTRODUCTION

Workers are the least visible, least valued and most vulnerable people in the food system. This paper describes the current status of food system workers and efforts to improve their working conditions. It focuses on how foundations can make a difference, by drawing lessons from exemplary campaigns and programs to address workers' needs, and by identifying key gaps in current funding in the light of global trends in food systems. This paper is a broad overview of issues that workers face and ways to

address them. More depth can be gained from the resources listed at the end of the paper.

In addition to agricultural production and on-farm processing, food system activities include the production and transport of agricultural chemicals and other inputs; off-farm food and beverage processing, manufacturing and packaging; distribution and transport; wholesale and retail sales; cooking and serving in private homes, restaurants and other businesses; and food waste disposal. Workers are the employees in all of these activities.

How many workers are in the food system, and where are they?

Agriculture alone employs more than a third of the world's labor force (over 1.3 billion people) and is the second greatest source of employment worldwide after services.¹ It is also the most important sector for female employment in many countries, especially in Africa and Asia. According to the Food and Agriculture Organization of the United Nations (FAO), women make up approximately 43% of the agricultural labour force in developing countries.² Agriculture accounts for about 70% of child labor worldwide.³ When other food system activities before and beyond the farm-gate are included, the total number of workers is considerably higher yet difficult to estimate, as the international organizations that report on employment, such as the International Labor Organization (ILO) and the Organization for Economic Cooperation and Development (OECD), do not categorize workers in this way.

The numbers of workers in fisheries is even more difficult to estimate than the number in land-based food systems. FAO estimates that 58.3 million people were engaged in the primary sectors of capture fisheries and aquaculture in 2012. Of these, 37% were engaged full time, 23% part time, and the remainder were either occasional fishers or had unspecified status.⁴ When fish processing and other ancillary activities are included, FAO estimates that "fisheries and aquaculture assure the livelihoods of 10–12% of the world's population".⁵ Note that these figures do not separate those who were employed (i.e., workers) from independent capture fishers and fish farmers or fishing vessel owners; that is, the numbers are not comparable to numbers of workers from the ILO.

The ILO estimates that the food and drink industry employed 22 million people globally in 2008 (the latest figures available), and 40% of its workers were women.⁶ The Food Chain Workers Alliance reports that nearly 20 million workers in combination were employed in the United States (US) alone in 2010 as farmworkers, in slaughterhouses and other processing facilities, warehouses, grocery stores, restaurants and food service.⁷ The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) is an international federation of trade unions representing workers employed in agriculture and plantations; the preparation and manufacture of food and

Agriculture alone employs more than a third of the world's labor force (over 1.3 billion people) and is the second greatest source of employment worldwide after services.

beverages; hotels, restaurants and catering services; and all stages of tobacco processing. While it does not collect primary data on the numbers of workers in various food system activities, the IUF claims that it represents over 12 million workers in the 126 countries in which it has member unions.⁸

To understand the current situation of food system workers' well-being and prospects for improvement, it is important to understand the framework that protects workers' human rights. This includes governmental regulations (at the local, national, regional or multilateral scales); corporate codes of conduct (which may apply across an industry or even cross industry sectors); and principles or guidelines developed by non-governmental organizations (NGOs) or multi-actor coalitions to guide corporate and industry actions, such as the CERES Principles or Rainforest Alliance standards, or with the imprimatur and facilitation of an international institution, such as the OECD Declaration on International Investment and Multinational Enterprises⁹ and the United Nations Guiding Principles on Business and Human Rights.¹⁰ The most widely recognized and supported labor guidelines, not surprisingly, are international agreements and conventions.

The ILO was established in 1919, and became the first specialized United Nations (UN) agency in 1946. Its mission is to "promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues".¹¹ Its structure gives equal voice to workers, employers and governments. The ILO has eight internationally recognized core Conventions that together prohibit forced labor, discrimination and the worst forms of child labor and that ensure a minimum age of employment, equal remuneration, freedom of association and the right to organize, and the right of collective bargaining.¹² These conventions expand and operationalize the labor rights initially codified in the 1948 Universal Declaration of Human Rights.

Importantly, the ILO conventions and the labor movement have historically been based on the assumption of a "standard employment relationship", with full-time work contracted for an unlimited duration with a single employer and protected against unjustified dismissal. This is no longer the reality in the international labor market, which is increasingly dominated by "precarious work"—work *without* guaranteed, specified or fixed hours and protection against dismissal, and *with* a fixed, limited-duration contract and multiple or disguised employers. In recognition of this trend, ILO and the IUF are seeking ways to apply labor standards to rural agricultural workers who fall outside of employment norms.¹³ In the OECD countries between 1985 and 2007, permanent waged employment rose by 21% while temporary jobs grew by 55%. In the EU, precarious jobs increased by 115% versus an overall employment growth of 26%. In Latin America, the proportion of workers on temporary contracts increased from 19 to

ILO conventions and the labor movement have historically been based on the assumption of a "standard employment relationship", with full-time work contracted for an unlimited duration with a single employer and protected against unjustified dismissal. This is no longer the reality in the international labor market.

26.5%.¹⁴ Reasons why precarious work now dominates so much of the food system are explained in the following section.

ISSUES FACED BY FOOD SYSTEM WORKERS AND THEIR CAUSES

Agriculture, while only a part of the food system, merits special consideration because of unique health and safety issues. Sources of occupational risk include working with machines, vehicles, tools and animals; exposure to excessive noise and vibration; slips, trips and falls from heights; lifting heavy weights and other work that leads to musculoskeletal disorders; exposure to dust and other organic substances, chemicals, and infectious agents; and other working conditions common to rural environments, such as exposure to extreme temperatures, inclement weather and attacks by wild animals. These hazards are exacerbated for children and women of childbearing age, especially through exposure to agricultural chemicals that affect growth and pregnancy outcomes.¹⁵ Additional reasons why agriculture is special, compared with other food system activities, are the prevalence of precarious work — which means that a large proportion of its workers are not covered by customary labor laws — and the large proportion of migrant and child laborers.

Improving conditions in agriculture is difficult for many reasons. First, in many low and middle income countries (LMICs), landless agricultural workers are the poorest and most vulnerable members of society and by necessity take the worst and lowest-paying jobs. Second, many agricultural workers are poorly protected by or even exempt from national labor laws. For example, both Canada and the US exempted farmworkers from their original Labor Relations Acts. Farmworkers are still exempt in the US, where migrant farmworkers often lack legal immigration status, and therefore fall completely outside of laws and social protections. Third, national legislation may exist but be poorly applied in practice and inadequately enforced by labor inspectors due to corruption or lack of capacity to reach dispersed workers in rural areas. While private audits are performed to comply with some crop certification programs, they often have loopholes that allow violations to be uncounted. Fourth, national systems for providing information about or improving occupational safety and health, wages and human rights in agriculture are inadequate in many countries. As a result, many workers are unaware of their rights and farmers unaware of their responsibilities, thus failing to comply with the legislation that does exist. In addition, trade unions encounter serious challenges organizing the agricultural workforce, including legal restrictions, geographical isolation and cultural attitudes. The prevalence of seasonal, migratory and casual labour without contracts (i.e., precarious work) along with low levels of literacy, lack of information about workers' rights, and isolation make organizing rural workers especially difficult.

The prevalence of seasonal, migratory and casual labour without contracts along with low levels of literacy, lack of information about of workers' rights, and isolation make organizing rural workers especially difficult.

4 IMPROVING THE WELL-BEING OF FOOD SYSTEM WORKERS

In rural areas around the world, informal employment (without contracts) constitutes 82.1% of total rural employment and 98.6% of agricultural employment. In contrast, in urban areas only 24.5% of employees are in informal employment.¹⁶ Nearly eight out of ten of the working poor who earn less than US\$1.25/day live in rural areas. Most jobs in rural areas do not ensure sufficient levels of income for workers to afford adequate food for themselves and their families.¹⁷ The world's largest corridor for international immigration is from Mexico to the US.¹⁸ More than 70% of all hired farmworkers in the US are foreign-born, mostly from Mexico; and about half lack legal immigration status. The poverty rate for farmworker families has decreased over the past 15 years, but it is still more than twice that of all wage and salary employees combined in the US; and it is higher than that of any other occupation.¹⁹

Workers in other food system activities have similar challenges to those in agriculture, particularly with respect to weak or unenforced regulations and difficulties organizing into unions. The hazards of work in meat-processing plants and restaurants, such as working at top speed with knives or other heavy equipment, cold temperatures and slippery floors, have been especially well documented.²⁰ Throughout the food system, workers are relatively invisible — in fields, in processing plants, behind the kitchen door — so businesses can hide abuse of human rights. Workers have few if any forums for voicing complaints, given the prohibitions against unions or difficulties organizing. Workers without immigration papers are especially at risk, since the threat of deportation hangs over them and unscrupulous employers may use this to keep workers from reporting harassment, accidents or illness.

Women, youth and ethnically marginalized people have particular challenges in the food system. While 48% of international migrants are now women,²¹ they end up more often than men in unskilled jobs.²² Predatory recruitment practices used by large-scale farms and processing plants target the most vulnerable workers, promising good long-term jobs that do not materialize. Women and ethnic minorities encounter racism, sexual abuse and greater difficulty seeking recourse to such abuse than males and people from dominant ethnic groups, especially as they enter precarious work. In addition, the life consequences of precarious work fall more heavily on women, who tend to be responsible for children and the household: irregular and unpredictable work schedules, financial insecurity and physical and psychological tolls.²³

In thinking about how to improve conditions for food system workers, it is important to understand the layers of cause behind poor conditions and the shifting dynamics of the global food system. Some of the problems in food system work are due to the nature of the work itself, such as contact with livestock or soil which may harbor diseases that can be transmitted to humans, and use of heavy machinery or sharp equipment. Some issues

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are due to pressures placed on workers by their immediate supervisors to increase speed and productivity, or failure of employers to provide personal protective equipment and adequate training in its use.

An additional layer of problems is due to low prices for most agricultural raw products, which may encourage farmers or other employers to push labor beyond its capacity in order to eke higher profits from the business. Many countries and cultures do not value agricultural or food work highly: this is reflected in low rates of pay, poor training, and inadequate attention to existing protective legislation. At the national and international levels, workers' issues can be seen as direct results of neoliberalism, the form of capitalism that dominates many industrialized and industrializing countries. This economic system rewards employers for casualizing and flexibilizing labor, in addition to paying the lowest possible wages.²⁴

Food system scholars, starting with Harriet Friedmann's and Philip McMichael's work,²⁵ have identified major regime shifts in food systems during the era of globalization, thus elucidating a global political economy of the movement of food around the world. The corporate food regime emerged in the 1970s, forming around transnational commodity networks (also called Global Production Networks or GPNs). This regime is characterized by the international transfer of money and products by transnational corporations, which now dominate most food system activities.²⁶ For example, the trading companies Archer Daniels Midland, Bunge, Cargill and Louis Dreyfus are now involved in 90% of the world's grain trade and have expanded their activities into food processing, agrochemicals production and distribution. Supermarkets are the newest controlling actors in global food flows: in 1992, the five largest supermarkets controlled 19% of grocery sales in the US; but by 2005, this proportion was up to at least 28.7%. In the UK, the top four retailers comprise 75% of the grocery market, and concentration of the top five supermarket chains exceeds 50% on average in every European country.²⁷

This degree of concentration and control means that large corporations can source food and raw materials from wherever in the world that labor is cheapest, sell wherever prices are highest, and create a home base wherever taxes are lowest. They have no allegiance to workers in the country where they incorporate, nor to the public good.²⁸ With their dramatically increasing wealth and power, a small group of corporations have bought political influence at the national and international levels. In their efforts to respond to consumer demand, compete against the other giants, comply with safety regulations and standardize production to reduce costs, supermarkets in particular are increasingly imposing rigorous quality specifications on their suppliers. The largest food producers can meet these specifications more easily than small-scale farmers, and the costs of upgrading products usually come to rest on

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workers in increased demands, faster line-speeds, and lower wages for the same amount of work.²⁹

Bilateral and multilateral "free trade agreements" are examples of ways that corporations and GPNs are benefiting tremendously at the expense of public health, small-scale farmers and labor. Currently (2014-2015) the Transpacific Partnership (TPP) and the Transatlantic Trade & Investment Partnership (TTIP) are under negotiation without oversight by the public or elected government officials. The negative consequences of the North American Free Trade Agreement on women, small farmers and labor have been well documented.³⁰ Many analysts and activists fear that new multilateral trade agreements will further intensify the concentration of huge food corporations and push costs further down the food system onto workers.³¹

While investment flows freely across borders in the corporate food regime, the cross-border flow of labor is more restricted. This is ironic, as international investment patterns in land are precisely why many people in poor countries have lost their prior livelihoods as small-scale farmers and been forced to immigrate to other countries in search of jobs. Migrants are often restricted by law from participating in political or civic life in their countries of destination, and cut off from family and community ties in their countries of origin by restrictions against going home then being readmitted by the destination country. Because the economies of many countries have come to rely on the remittances of migrant workers, while destination countries depend upon their cheap labor, governments and business interests seek to "manage" the movement of migrants. Destination countries may deny migrant workers fundamental labor rights such as freedom of association and the right to bargain collectively. In many countries, migrant workers are explicitly excluded from labor law protections. Economic migrants seldom have the legal right to live and work in wealthier countries unless they are highly skilled, even when jobs are going unfilled because legal residents of those countries do not want them.³² Meanwhile, human trafficking is a massive black market bringing workers to fill food system jobs from fields to restaurants. The latest data from the ILO documents 21 million victims of forced labour, including 11.4 million women and girls and 9.5 million men and boys.³³ Migrant workers and indigenous people are especially vulnerable to slavery, which often takes the form of debt bondage.³⁴

The abrupt rise in food prices in 2007–2008 and the financial crash of 2008 led to big changes in the corporate food regime, most obviously a frantic scramble by investors for cheap arable land (so-called "land grabs"). Although there is no clear agreement on the dynamics and drivers of the next food regime, there is no question that global forces are impinging on labor and will be prominent in this period. Among these forces is climate change, which is already causing major disruptions in food production due

Many analysts and activists fear that new multilateral trade agreements will further intensify the concentration of huge food corporations and push costs further down the food system onto workers.

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to drought, floods, and heat; diseases moving into regions where they were not endemic previously; and growing instability of financial markets because of their overcomplexity, lack of regulation to address the causes of the 2008 global collapse, and social upheaval accompanying climate change. Inequity has been growing rapidly both within and between nations over the last decade.³⁵ As inequity grows, the potential for democratic participation by people with low incomes shrinks: "corporate authoritarianism" takes over and the influence of trade unions declines.³⁶

The situation for workers is very likely to deteriorate over the next few decades: in addition to even greater economic migration with increasing numbers of people in poverty will be political migration, as ethnic and cross-border conflict escalates over access to water and other scarce resources, and environmental migration, as home lands become uninhabitable from increasing numbers of floods, droughts and sea-level rise. Since food system workers have few privileges and suffer disproportionately in a relatively stable global environment, they are likely to be marginalized further with greater environmental and political instability and chaos. These trends point to the growing urgency to increase support for migrant workers and efforts to rebalance power in the food system.

The challenges for improving working conditions in the food system must be addressed on several fronts simultaneously, with particular attention to the most vulnerable workers: children, women, and seasonal or casual workers. While anti-corporate campaigns are an important way to raise awareness of abusive practices and growing power imbalances between workers and employers, efforts to strengthen national and international regulations and guidelines are also critical. Poor working conditions can be separated into those that violate human rights conventions (such as the core ILO conventions against forced labor and children's labor) and those due to precarious work. In addition, issues are different across food system activities and in different regions, depending on which crops are grown and where they are processed. Table 1 shows major workers' issues across the food system, differentiated by stages of the supply chain and different kinds of worksites. The next section describes some of the efforts to address food workers' issues through campaigns.

The situation for workers is very likely to deteriorate over the next few decades as migration due to conflict over water and scarce resources rises.

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Table 1. Issues Faced by Food Systems Workers

Labour Activity		Raw commodity production	Low-value processing	High-value processing	Wholesale /retail	Restaurant
Fundamental HR violations	Freedom of association	X	X	X	X	X
	Child labour	X	X			
	Forced labour	X	X	X		
	Human trafficking	X	X	X		X
	Occupational health & safety	X	X	X	X	X
	Excessive working hours	X	X	X	X	X
	Gender-based harassment & discrimination	X	X	X	X	X
	Low and withheld wages	X	X	X	X	X
	No legal status for econ. immigrants	X	X	X	X	X
Corporate food regime issues	Low and irregular wages	X	X	X	X	X
	Lack of social protection	X	X	X	X	X
	No formal contracts	X	X	X	X	X
	Exclusion from labour laws	X	X	X		X
	Seasonal & PT work	X	X	X	X	X

LESSONS FROM EXEMPLARY CAMPAIGNS AND STRATEGIES

Two early campaigns stand out as prototypes. The 1965–70 grape pickers' strike and boycott in California was the first significant win by farmworkers against growers, after more than 100 years of fighting terrible working conditions and wages in the US. With unprecedented support from consumers across the US, table grape growers signed their first union contracts after only five years of campaigning, granting workers better pay, benefits, and social protections. The international Nestlé baby formula campaign (1977–present) did not address food system workers, but its strategies for protecting vulnerable people against the tactics of a powerful corporation became a model for subsequent campaigns in the food system. Both of these campaigns raised widespread public awareness and outrage and mustered consumer pressure through boycotts. The Nestlé campaign involved international adjudication by invoking a World Health Assembly code, as well as national Standards agencies. Both campaigns brought together supporters from many sectors, including religious communities, students, advocacy organizations, and trade unions.

The following, more recent campaigns address specific issues that food system workers face, and illustrate additional strategies that are being used today to fight for legal rights and improvements in precarious work. These short descriptions are followed by a compilation of lessons learned from corporate accountability campaigns.

Freedom of Association. The US-based Killer Coke campaign and the 2001 lawsuit *Sinaltrainal v. Coca-Cola*, filed in Miami, focused on the use of paramilitary squads to target and assassinate trade union activists in Colombia. International Labor Rights Forum worked with the trade union Sinaltrainal in Colombia, which had been fighting for better conditions for many years.³⁷ In a similar campaign, IUF and Unilever negotiated an agreement in 2009 over the rights of precarious workers at the company's Lipton/Brooke Bond tea factory in Khanewal, Pakistan.³⁸

Child labor: A long-standing cocoa campaign in West Africa has focused on trafficked child labor from neighboring countries into Cote d'Ivoire, which produces about 40% of the world's cocoa. Original targets of Anti-Slavery International, which began the campaign, included cocoa traders Archer Daniels Midland, Cargill and Barry Callebaut. As more organizations joined the campaign, targets shifted to major chocolate brands Nestlé, Hershey, Mars and Cadbury.³⁹ Other campaigns have fought abuses in shrimp processing in Southeast Asia, including child labor and trafficked labor that was discovered in shrimp processing sheds, and migrant workers on fishing vessels. Targets include major supermarket chains Tesco, Walmart and others.⁴⁰

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Gender-based violence, occupational safety and health: International Labor Rights Forum has documented various abuses on palm oil plantations, including unprotected work with hazardous chemicals. The end users of the products from these plantations include Pepsi and Kraft.⁴² In Kenya, campaigns have focused on sexual harassment of female tea plantation workers producing tea for Unilever. Somo and the India Committee of the Netherlands found that workers on plantations certified by Rainforest Alliance faced lack of benefits, wage withholding, gender and ethnic discrimination, lack of protective gear when applying pesticides, sexual harassment, bad housing and restrictions on freedom of association and collective bargaining.⁴²

Domestic migrant labor: The Coalition of Immokalee Workers' (CIW's) Fair Foods Campaign has succeeded in its call for Florida-based migrant tomato pickers to be paid a 'penny a pound' more for their work. Eleven major corporations, including the four largest fast-food companies (McDonald's Subway, Burger King and Yum Brands), the three largest food-service providers (Compass Group, Aramark and Sodexo) and retailers Walmart, Whole Foods, Trader Joe's and The Fresh Market have agreed to date to the 'penny a pound' campaign. Through creative targeting of retailers, on-line organizing and consumer education (including through the documentary film *Food Chains*), companies signing on to the Fair Foods Campaign agree that a human-rights-based Code of Conduct will be implemented on the farms that grow their tomatoes. CIW is now expanding the Fair Foods Campaign beyond tomatoes, using its strategy of design, monitoring and enforcement by workers whose rights are being exploited.

Higher minimum wages for fast-food workers: The Service Employees International Union (SEIU) has been spearheading a campaign to increase minimum wages and benefits at fast-food restaurants in the US via strikes, civil disobedience, social media and consumer education. At a time that many states in the US have launched powerful anti-union legislation, SEIU has been successful in getting minimum wage increases back on the public agenda. The "Fight for \$15" began in New York City in 2012 with fast-food workers demanding at least \$15 an hour and the right to unionize without retaliation. Since then, it has spread to more than 100 cities and many industries, including retail, home care, hospitality and airport services. In March of 2015, the general counsel's office of the US National Labor Relations Board issued 13 complaints, containing dozens of charges, against the McDonald's Corporation and many of its franchisees for violating employees' rights to press for better pay and working conditions. This is a significant sign of progress for the campaign.⁴⁴

Land-grabbing: GRAIN International started documenting land-grabs in 2012 by launching a database of 416 recent large-scale acquisitions by foreign investors of land for food production. The cases covered nearly 35

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million hectares of land in 66 countries.⁴⁵ In 2014, Oakland Institute and The Rules, along with other NGOs, farmer and consumer organizations from around the world, launched a campaign to hold the World Bank accountable for its role in land-grabbing.

This description of some recent or ongoing campaigns illustrates how strategies and tactics to improve conditions for food system workers have responded to changing trends in international labor and the corporate food regime. Some of the main characteristics of contemporary campaign tactics include:

- Using celebrities or well-known public figures to raise attention to causes.
- Applying pressure on corporations through a mix of shareholder resolutions and actions, lawsuits, direct action, "ethical competitors", dialog, and various legislative instruments.
- Influencing consumers with diverse and sophisticated instruments, such as ethical shopping guides, product labeling, Socially Responsible Investment, and alternative trading organizations.
- Organizing workers and mobilizing public support rapidly with sophisticated communications technology such as social media.
- Addressing demands by workers for dignity, voice and fair treatment, in addition to improved working conditions and wages.

These strategies are described in more detail in the still-timely review by Robin Broad and John Cavanaugh prepared for the International Flows and the Environment Project of World Resources Institute.⁴⁶ The lessons below draw from their analysis.

Lessons from Campaigns:

1. The aims need to be clear and achievable, and target the right institution. Simple, graphic goals are easier to achieve because the public grasps them quickly. However, campaign goals may need to evolve over time.
2. Endorsement by government, corporate or religious professionals, celebrities and other well-known public figures can help build credibility and support. Sometimes getting a single corporation to change sides and become an unusual ally and champion is effective (e.g., Cadbury's announcement of switching to Fair Trade).
3. High profile media of different kinds is essential to "daylight" issues, elicit a groundswell of public support and encourage corporate leaders to negotiate with labor. The media materials need to be high quality and targeted at different audiences (e.g., clear, attractive reports for the web-browsing and professional audiences; social media for the audiences that use it; radio for poor countries and rural areas where Internet may be less available).

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4. Actions that lead to legislation or binding agreements, including collective bargaining agreements, have a broader reach than actions that only achieve symbolic wins.
5. North-South collaboration of activist organizations works well, but needs to be coordinated closely with agreement on the primary indicators of success.
6. Inclusion of different kinds of stakeholders can help build pressure on corporations and industry. A successful example of this is the transnational Uzbekistan Cotton Campaign.
7. Different tactics can reinforce each other. In particular, confrontational and oppositional tactics can make space for engagement tactics.
8. Actions in countries that have less strategic significance to the U.S. and E.U. governments are likely to be more successful.
9. Effective monitoring of wins, and an infrastructure that enables this, is essential to ensure that gains do not erode.

Governments and existing international institutions are not able to effectively govern the corporate food regime.

MAJOR OBSTACLES, CHALLENGES AND GAPS IN INVESTMENT

The international labor market is changing in ways that make organizing and accountability more difficult. The most important changes are the growing flexibilization and casualization of workers in Global Production Networks (GPNs); the reality that precarious and standard employees are now common in the same business, creating two tiers of employees with very different treatment; tremendous increases in both documented and undocumented immigration; and growing distance between employer and employee (such as by use of labor contractors or multiple layers of employers).

The labor market is responding to the restructuring of GPNs within the corporate food regime. To some extent, it is beginning to respond to emerging international crises as environmental and social impacts of climate change take effect. Unfortunately, major political and economic trends do not support workers' rights and social upgrading of GPNs to improve conditions and wages for workers. In particular, neoliberalism has sealed the bonds between governments and corporations, leading to a breakdown of democratic process. The "recovery" from the economic crisis has benefited only the wealthiest and led to massive corporate restructuring and even greater concentration of power.

With the growing dominance of GPNs in the food system, a gap in governance is emerging because governments and existing international institutions are not able to effectively govern the corporate food regime. New institutions are beginning to appear in that gap, but they can be either challenges or opportunities, depending on circumstances. For example, the EU has done the most to promote better labor conditions in regional free trade agreements, such as by giving trade preference status to

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countries that apply ILO's core labour standards and other basic rights. By contrast, ILO core standards were not referenced in NAFTA or CAFTA, although these included side agreements on labor with limited provisions.⁴⁷ Many trade and investment agreements create unfavorable conditions for the enforcement of labor rights. On the other hand, the UN Guiding Principles on Business and Human Rights provide new opportunities for engagement with governments, industry actors and global civil society.

Many analysts point to serious gaps and needs in current support for global workers. Additional gaps are apparent from the lack of good data, knowledge platforms, and strong social movements and coordination across organizations. Some of the major funding gaps are:

- Sustained support for transnational corporate campaigns. Coalitions must be transnational to counter the transnational reach of corporations, yet this form of organizing requires extra coordination effort.
- Sustained support for movement building across organizations and interest areas to provide support to workers.
- Better data on working conditions generally, but particularly in rural and other hard-to-reach regions in the developing world and on the high seas. Fishing and the seafood sector have only very recently become subjects of workers' rights analyses. However, the data collection to date relies on a handful of poorly funded grassroots organizations in the developing world that are painstakingly gathering testimony from victims of labor abuse. The State Department and US Agency for International Development are beginning to fund new research on topics of particular interest to the US government, such as seafood production.
- Similar basic grassroots investigative work of labor abuses and violations in all food-related sectors. The US Department of Labor (DoL) played an early and influential role in gathering data globally on products made with forced or child labor. It produces an annual "List of Goods" that includes such products as cocoa, bananas, rice, dried fish, and numerous other food products where labor abuse has been documented in over 100 countries.⁴⁸ This is the best comprehensive source of information on extreme labor rights abuse in food-related sectors worldwide at present. However, US DoL research staff are limited in this effort by the severely limited data sources on this topic. Moreover, the list does not cover the full spectrum of labor rights abuse. There is no similarly comprehensive source on freedom of association violations, health and safety violations, etc.
- Limited data on global migration flows and complete lack of data to globally track which migrants end up in food sector-related activities. The World Bank has started a new website on migration and development, KNOMAD, to synthesize existing knowledge and generate new knowledge for use by policy makers in both sending and receiving countries.

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- Integration of data on worker flows with the flows of goods and money, using a food systems lens, to incorporate the best labor trend analysis with emerging analyses of the political economy of food systems.
- Support for labor unions, farmers' associations, associations of self-employed workers and collective action. This is still vital, but must use new tools to address new challenges, such as migrant labor working in the same industries across countries. The dramatic rise of Workers' Centers has been in response to the needs of difficult-to-organize constituencies.⁴⁹
- Pressure on States to increase regulations to institutionalize reforms and agree to regional and international binding agreements to protect workers. While the 2011 passage of the UN Guiding Principles on Business and Human Rights shifted attention away from States to the human rights responsibilities of corporations, States still have an essential role.⁵⁰
- Research on the impact of voluntary standard systems to understand how and where they are effective or not with regards to workers' rights, and strengthening such systems to improve their positive impacts.

RECOMMENDATIONS OF STRATEGIC AREAS FOR ACTION AND INVESTMENT

- Support sustained (long-term) movement building across organizations and movements, such as by connecting labor movements with fair trade, farmers' organizations, or other social justice actors.
- Support corporate or industry-directed strategic campaigns to promote transparency and accountability for workers' rights.
- Strengthen the ability of human rights organizations and others to document and report workers' conditions, especially in hard-to-reach regions.
- Enable research on the effectiveness of various tactics and strategies to improve conditions for workers, in addition to data collection on migration, precarious work and abuses of workers' rights.
- Support innovative organizing strategies for labor movements, such as:
 - the promotion of framework agreements with a single multinational corporation in multiple countries, or with an industry association;
 - using new tools to connect migrant workers across borders; or
 - promoting new legal frameworks to enable self-employed workers to bargain collectively.
- Facilitate face-to-face meetings between people who are working on shared campaigns in the global North and South to enable them to

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- develop shared strategies and tactics, and to engage as equal partners with agreed-upon targets for change.
- Support efforts by various stakeholders, including unusual alliances of stakeholders, to change the rules that govern corporate behavior, rather than focusing on individual abuses by individual corporations.
- Support the participation of representatives from workers' organizations and movements in regional or international standard setting and relevant forums, such as ILO meetings and the work of the UN Committee on World Food Security. South-North connections are important to enable effective advocacy to address global rulemaking.
- Support monitoring of agreements to ensure compliance. (But note that monitoring by NGOs is controversial with unions.)
- Bolster government mechanisms to regulate and comply with global norms. In particular, ensure that governments extend basic labor protections to all workers, including often-excluded rural agricultural workers. Addressing this gap effectively will require strengthening social movements and enabling them to engage in productive dialogue with their governments.
- Support organizations seeking to fundamentally transform the corporate structure, such as by revoking corporate charters on social grounds.

RESOURCES FOR FURTHER INVESTIGATION

Websites:

- Advancing Human Rights: The State of Foundation Global Grantmaking — Labor Issue Area (<http://humanrights.foundationcenter.org/issues/labor/>)
- Ariadne: European Funders for Social Change and Human Rights (<http://www.ariadne-network.eu/>)
- International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Association (IUF; <http://www.iuf.org/w/>)
- International Labor Organization (ILO; <http://www.ilo.org/global/lang--en/index.htm>)
- Chronic Poverty Advisory Network (<http://www.chronicpovertynetwork.org/>)
- Campaigning organizations:
 - Action Aid International (<http://actionaid.org/>)
 - Anti-Slavery International (<http://www.antislavery.org/english/>)
 - Coalition of Immokalee Workers (<http://ciw-online.org/>)
 - Environmental Justice Foundation (<http://www.ejfoundation.org/>)
 - Green America (<http://www.greenamerica.org/>)
 - International Labor Rights Forum (<http://www.laborrights.org/>)

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- Oxfam International (<http://www.oxfam.org/>)
- United Food and Commercial Workers Union International (<http://www.ufcw.org/>)

Reports:

- Man-Kwun Chan. 2012. Making Agricultural Value Chain Programmes Work for Workers: A Practical Guide for Development Donors and Practitioners. WIEGO Technical Brief #4. Available at <http://wiego.org/publications/making-agricultural-value-chain-programmes-work-workers-practical-guide-development-don>
- Chronic Poverty Advisory Network. 2013. Working out of chronic poverty. Available at <http://static1.squarespace.com/static/539712a6e4b06a6c9b892bc1/t/539ec4a8e4b0c608f4530f50/1402913960815/Employment+Policy+Guide.pdf>
- Ergon Associates. Labor & Human Rights in Agricultural Supply Chains. Briefings. Available at <http://www.ergononline.net/images/stories/articles/agri1.pdf>
- Walk Free Foundation. 2014. Tackling Modern Slavery in Supply Chains. A Guide 1.0. Available at <https://www.walkfree.org/business/>

ENDNOTES AND REFERENCES

- 1 ILO Definition of "agriculture" from the 2010 Code of Practice on Safety and Health in Agriculture: "agricultural and forestry activities carried out in agricultural undertakings including crop production, forestry activities, animal husbandry and insect raising, the primary processing of agricultural and animal products by or on behalf of the operator of the undertaking as well as the use and maintenance of machinery, equipment, appliances, tools, and agricultural installations, including any process, storage, operation or transportation in an agricultural undertaking, which are directly related to agricultural production", excluding (a) subsistence farming; (b) industrial processes that use agricultural products as raw material and the related services; and (c) the industrial exploitation of forests"
- 2 Food and Agriculture Organization (FAO). 2013. FAO Statistical Yearbook 2013: World Food and Agriculture. Rome, FAO.
- 3 International Labor Organization (ILO). 2011. Code of Practice on Safety and Health in Agriculture. Available at http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_160706.pdf
- 4 Food and Agriculture Organization (FAO) 2014. The State of World Fisheries and Aquaculture: Opportunities and Challenges. Available at <http://www.fao.org/3/a-i3720e.pdf>
- 5 Ibid. p. 50.
- 6 International Labor Organization (ILO). 2015a. Food, drink and tobacco sector. Available at <http://www.ilo.org/global/industries-and-sectors/food-drink-tobacco/lang--en/index.htm>.

4 IMPROVING THE WELL-BEING OF FOOD SYSTEM WORKERS

- 7 Food Chain Workers Alliance (FCWA). 2012. The Hands that Feed Us: Challenges and Opportunities for Workers along the Food Chain. Available at <http://foodchainworkers.org/wp-content/uploads/2012/06/Hands-That-Feed-Us-Report.pdf>
- 8 International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF). 2009. The IUF - building global solidarity. Available at <http://www.iuf.org/w/?q=node/149>.
- 9 Organization for Economic Development and Cooperation (OECD). 2011. Text of the Declaration on OECD Declaration on International Investment and Multinational Enterprises. Available at <http://www.oecd.org/investment/investment-policy/oecddeclarationoninternationalinvestmentandmultinationalenterprises.htm>.
- 10 Human Rights Council. 2011. Guiding Principles on Business and Human Rights. Available at: http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf
- 11 <http://www.ilo.org/global/about-the-ilo/lang--en/index.htm>
- 12 International Labor Organization (ILO). 2000. ILO "core" conventions ratifications surge past 1 000 mark. Available at http://www.ilo.org/global/about-the-ilo/media-centre/press-releases/WCMS_007909/lang--en/index.htm.
- 13 See International Labor Organization (ILO). 2015c. Giving a Voice to Rural Workers. ILC.104/III/1B. Geneva, International Labour Office; Peter Rossman. 2013. Establishing rights in the disposable jobs regime. *International Journal of Labor Research* 5(1): 23-40.
- 14 Ibid. Rossman 2013.
- 15 ILO 2011. Op cit. Code of Practice...
- 16 ILO 2015c. Op cit. Giving a Voice to Rural Workers...
- 17 Ibid.
- 18 International Labor Organization (ILO). 2014. Labor migration - facts and figures. Available at http://www.ilo.org/global/about-the-ilo/media-centre/issue-briefs/WCMS_239651/lang--en/index.htm.
- 19 Wainer, Andrew. 2014. Immigrants in the US food system. pp. 83-85 In: Ending Hunger in America. Bread for the World Report 2014.
- 20 See FCWA 2012. Op cit. The Hands that Feed Us....; Ted Genoways. 2014. The Chain: Farm, Factory, and the Fate of Our Food. Harper/Harper-Collins Publishers; Saru Jayaraman. 2014. Behind the Kitchen Door. ILR Press; Eric Schlosser. 2001. Fast Food Nation. Houghton Mifflin Company.
- 21 International Labor Rights Forum 2014. The Fairness Gap: Farmer Incomes and Root Cause Solutions to Ending Child Labor in the Cocoa Industry. Available at <http://www.laborrights.org/publications/fairness-gap>
- 22 Jolly, Susie with Hazel Reeves. 2005. Gender and Migration Overview Report. BRIDGE, Institute of Development Studies, UK.
- 23 Mayer, Stéphanie. 2015. Organizing at Walmart: Lessons from Quebec's women. *Global Labour Journal* 6(1): 4-23.
- 24 Ibid.; BASIC. 2014. Who's got the power? The Report on Imbalances of Power in Agricultural Supply Chains. Commissioned by Fair Trade Advocacy Office, PFCE (la Plate-Forme pour le Commerce Équitable), Traidcraft, and Fairtrade Deutschland. In partnership with World Fair Trade Organization and Fairtrade International. Available at <http://www.fairtrade-advocacy.org/power>
- 25 Friedmann, Harriet. 1987. International regimes of food and agriculture since 1870. pp. 258-276 In: T. Shanin (Ed.). *Peasants and Peasant Societies*. Oxford: Basil Blackwell; Harriet Harriet and Philip McMichael. 1989. Agriculture and the state system: The rise and fall of national agricultures, 1870 to the present. *Sociologia Ruralis* 29(2): 93-117; McMichael. 2009. A food regime genealogy. *The Journal of Peasant Studies* 36(1): 139-169.

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- 26 Constance, Doug, Mary Hendrickson and Philip H. Howard. 2014. Agricultural concentration: Globalization, market power and resistance. pp. 31-58 in William D. Schanbacher (Ed). *The Global Food System: Issues and Solutions*. Praeger Press.
- 27 BASIC 2014. Op cit. Who's Got the Power?...
- 28 Reich, Robert. 8 March 2015. The conundrum of corporation and nation. Available at <http://robertreich.org/post/113130324775>.
- 29 Ibid.; Stephanie Barrientos, Frederick Mayer, John Pickles and Anne Posthuma. 2011. Decent work in global production networks: Framing the policy debate. *International Labour Review* 150(3-4): 299-317.
- 30 Faux, Jeff. 2013. NAFTA's Impact on US Workers. Economic Policy Institute. Available at <http://www.epi.org/blog/naftas-impact-workers/>; GRAIN. 2015. Structural Reforms, Free Trade Agreements and the War on Subsistence. Barcelona, Spain; International Gender & Trade Network (IGTN) and Institute for Trade & Agricultural Policy (IATP) 2007. Case Studies Highlighting the Gendered Dynamic around Agriculture, Trade and Food Sovereignty. Available at <http://www.iatp.org/documents/case-studies-highlighting-the-gendered-dynamic-around-agriculture-trade-and-food-sovereign>; F. Ray Marshall. 1993. The implications of the North American Free Trade Agreement for workers. Center for Immigration Studies. Available at <http://cis.org/NAFTA-EffectOnWorkers>
- 31 See for example: Gallagher, Kevin and Tim Wise. 8 September. 8 September 2011. The false promises of Obama's trade deals. *The Guardian*. Available at www.theguardian.com/commentisfree/cifamerica/2011/sep/08/obama-trade-deals; Ben Lilliston. 2014. Big Meat Swallows the Trans-Pacific Partnership. Institute for Agriculture & Trade Policy. Available at http://www.iatp.org/files/2014_11_05_TTPBigMeat_BL.pdf
- 32 For example: CBS/AP. 28 December 2014. California growers fear Pres. Obama's executive action on immigration will intensify farm labor shortage. CBS San Francisco Bay Area. Available at <http://sanfrancisco.cbslocal.com/2014/12/28/central-valley-farmers-fear-obama-executive-action-immigration-will-intensify-labor-shortage/>; Kirk Johnson. 5 October 2011. Hiring locally for farm work is no cure-all. *New York Times*. Available at http://www.nytimes.com/2011/10/05/us/farmers-strain-to-hire-american-workers-in-place-of-migrant-labor.html?_r=0
- 33 International Labor Organization (ILO). 2015b. Forced labour, human trafficking and slavery. Available at <http://www.ilo.org/global/topics/forced-labour/lang--en/index.htm>
- 34 Ibid.; State Department. 2014. Vulnerability of Indigenous Persons to Human Trafficking. Office to Monitor and Combat Trafficking in Persons. Available at <http://www.state.gov/documents/organization/233942.pdf>
- 35 Credit Suisse. 2014. Global Wealth Report 2014. Available at <https://publications.credit-suisse.com/tasks/render/file/?fileID=60931FDE-A2D2-F568-B041B58C5EA591A4>; Oxfam International. 2015. Wealth: Having It All and Wanting More. Available at http://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/ib-wealth-having-all-wanting-more-190115-en.pdf
- 36 Gallas, Alexander, Christoph Scherrer, Michelle Williams. 2014. Inequity — the Achilles heel of free market democracy. *International Journal of Labor Research* 6(1): 143-161.
- 37 Gill, Lesley. 2009. The limits of solidarity: Labor and transnational organizing against Coca-Cola. *American Ethnologist* 36(4): 667-680.
- 38 IUF. 2009. Op cit. The IUF - building global solidarity...
- 39 Ryan, Orla. 2012. *Chocolate Nations: Living and Dying for Cocoa in West Africa*. Zed Books; ILRF 2014. Op cit. The Fairness Gap...
- 40 Environmental Justice Foundation. 2014. Slavery at Sea: The Continued Plight of Trafficked Migrants in Thailand's Fishing Industry. Available at http://ejfoundation.org/sites/default/files/public/EJF_Slavery-at-Sea_report_2014_web-ok.pdf; Michael Field. 2014. *The Catch: How Fishing Companies Reinvented Slavery and Plunder the Oceans*. Awa Press; Solidarity Center. 2008. *The True Cost of Shrimp*. Available at http://www.shrimpnews.com/PDFsFolder/pubs_True_Cost_of_Shrimp.pdf

4 IMPROVING THE WELL-BEING OF FOOD SYSTEM WORKERS

- 41 International Labor Rights Forum 2013. Empty Assurances: The Human Cost of Palm Oil. Available at <http://www.laborrights.org/publications/empty-assurances-human-cost-palm-oil>
- 42 van der Wal, Sanne. 2011. Certified Unilever Tea: Small Cup, Big Difference? Amsterdam: SOMO.
- 43 Weissman, Jordan. 7 September 2014. The fast food strikes have been a stunning success for organized labor. Available at http://www.slate.com/blogs/moneybox/2014/09/07/the_fast_food_strikes_a_stunning_success_for_organized_labor.html
- 44 Editorial Board. 21 December 2014. Workers' rights at McDonald's. The New York Times. Available at <http://www.nytimes.com/2014/12/22/opinion/workers-rights-at-mcdonalds.html>.
- 45 GRAIN. 23 February 2012. GRAIN releases data set with over 400 global land grabs. Available at <http://www.grain.org/article/entries/4479-grain-releases-data-set-with-over-400-global-land-grabs>
- 46 Broad, Robin and John Cavanaugh. 1997. The Corporate Accountability Movement: Lessons and Opportunities. Prepared for the International Flows and the Environment Project, World Resources Institute.
- 47 Barrientos et al. 2011. Op cit.
- 48 Commodities known to be problematic with respect to child labor/forced labor: <http://www.dol.gov/ilab/reports/child-labor/list-of-goods/>
- 49 Miller, Justin. 26 February 2015. Workers centers: Organizing the "unorganizable". American Prospect. Available at <http://www.prospect.org/article/workers-centers-organizing-unorganizable>.
- 50 Locke, Richard M. 2013. The Promise and Limits of Private Power. Cambridge University Press.