



Advancing equity, equality and non-discrimination in food systems: Pathways to reform

year 2018

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Chair's Round-up

CORNELIA RICHTER

UNSCN Chair

Vice-President of International Fund for Agricultural Development



Dear UNSCN News reader,

As the new Chair of the United Nations System Standing Committee on Nutrition (UNSCN), I am delighted to take the opportunity afforded by this year's edition of UNSCN News to introduce myself and talk about our vital work. This Committee is putting nutrition on the global agenda because the issue is urgent. Together with Member States and member organisations, I plan to vigorously support UNSCN and its unique mandate.

Addressing food and nutrition security as one of the Sustainable Development Goals (SDGs) has been a central theme of my roles in development cooperation over the past 30 years. I am concurrently the new Vice-President of the International Fund for Agricultural Development (IFAD), where we are also working to transform rural areas and agricultural value chains in ways that improve nutrition in rural communities. We are convinced that better food production systems will ensure that rural women and men have the resources and the knowledge they need to produce and consume nutritious food. At IFAD, we are making nutrition a mainstream part of all our programmes alongside climate change, gender and youth. All of our country strategies and half of our projects will be nutrition-sensitive by the end of 2018.

Looking around the world, it is clear that we need to intensify global efforts to enhance food and nutrition security. After many years of sustained progress in reducing undernutrition, chronic hunger is again on the rise – up from 777 million people in 2015 to 815 million in 2016. Clearly, we are not on track to achieve globally agreed nutrition targets.

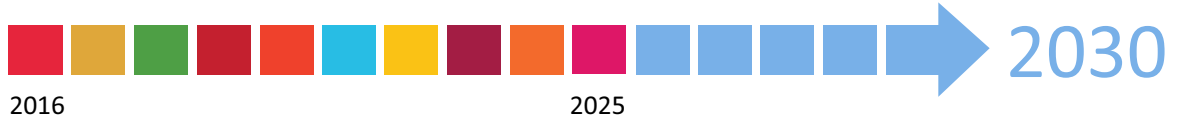
This year's edition of UNSCN News focuses on equity, equality and non-discrimination as drivers of good nutrition. Our members selected this theme and it illustrates their continued dedication not only to reducing malnutrition, but to eradicating it and ensuring that no one is left behind. In every country around the world, there are people suffering from one or more forms of malnutrition. Exactly who is malnourished, however, depends largely upon gender, age, income, ethnicity and geographic location. Country averages tend to hide this skewed distribution and make it harder to identify and help those in need of better nutrition. If we are to ensure equal access to nutritious and adequate diets, we have to simultaneously tackle interlinked challenges at the individual, household, community, country, regional and global levels. We also need to understand the interdependence of rural and urban areas – for food, energy, clean water and air, and for the exchange of goods and services – to ensure that the 2030 Agenda can be achieved and the SDGs met.

We, the UN member organisations and Member States, must play a crucial role in ensuring that through partnership and cooperation the benefits of education, health, adequate food production systems and good governance are shared more equally around the globe. I am looking forward to working with you to address these challenges.

Cornelia Richter
UNSCN Chair

When

NUTRITION DECADE



What

WHA targets



NCD targets



How

ICN2 Framework for Action

- Sustainable, resilient food systems for healthy diets.
- Aligned health systems providing universal coverage of essential nutrition actions.
- Social protection and nutrition education.
- Trade and investment for improved nutrition.
- Safe and supportive environments for nutrition at all ages.
- Strengthened governance and accountability for nutrition.

UNSCN Secretariat Update

STINEKE OENEMA

UNSCN Coordinator

We are now in the third year of the UN Decade of Action on Nutrition.¹ In April 2018, the Food and Agricultural Organization of the United Nations (FAO) and the World Health Organization (WHO), the co-conveners of the Decade, presented their first biennial progress report (FAO and WHO 2018).² It chronicled the commitments made and actions taken by countries and the UN System and suggested areas for improvement.

The progress report followed the publication of the Nutrition Decade Work Programme³ (FAO and WHO 2017), a living document that not only shows where action can be taken based on the recommendations of the Second International Conference on Nutrition in 2014 (ICN2),⁴ but also where work is already taking place, as a growing number of actors take responsibility for certain areas. The Norwegian government, for example, is leading an Action Network for Sustainable Food from the Oceans and Inland Waters for Food Security and Nutrition⁵ (Global Action Network 2018). This underscores not just the need for healthy diets now, but for solidarity with and equal opportunity for future generations by not depleting natural resources.

UNSCN strives to strike a balance between its current work on achieving good nutrition for all and healthy diets that work across sectors, and being mindful of future generations. One way of doing this is through the continued expansion of our membership base. In the past two years, we have been delighted to welcome UN Environment, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and UN Women as new members. This year, we welcomed UNIDO, the UN Industrial Development Organization. Together with UNIDO, we hope to boost



UNSCN's work in relation to the food environment, food processing and small and medium enterprises. Several of our members, including the World Food Programme (WFP) and the WHO, have already expressed interest in working with UNIDO on certain aspects of the food system in order to improve nutrition for all.

As more actors enter the nutrition arena, ready to contribute with their capacities, resources, and unique areas of expertise, we need to channel this energy into consistent and coherent actions for the sustainable improvement of nutrition. UNSCN is prepared to meet this challenge and has intensified its collaborations with the UN Network for Scaling Up Nutrition (SUN) Secretariat to strengthen the link between global policy coherence, programming and action for impact at country level.

UNSCN's activities this year show its dedication to policy coherence, as well as to consistent and accountable delivery. In this context, it is important to note that, as a committee, UNSCN is also accountable. After a few years' interruption, UNSCN has been asked to resurrect its yearly accountability reports to the Economic and Social Committee of the UN. In April, it presented its report for 2018 at the UN headquarters in New York. The review triggered quite a reaction by some Member States present, underlining the high degree of concern about malnutrition levels worldwide and the need for coherent policies, a scaling up of actions at country level and support for the UN Decade of Action on Nutrition.

1 http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/259.

2 <https://www.unscn.org/en/topics/un-decade-of-action-on-nutrition?idnews=1815>.

3 <https://www.unscn.org/en/topics/un-decade-of-action-on-nutrition?idnews=1791>.

4 <http://www.fao.org/about/meetings/icn2/en/>.

5 <https://nettsteder.regjeringen.no/foodfromtheocean/>.

At the international level, this year, UNSCN has placed great emphasis on the processes surrounding the High Level Political Forum (HLPF)⁶ in New York in a bid to achieve policy coherence and advocacy for nutrition. The HLPF has identified “Transformation towards sustainable and resilient communities” as the main theme of its 2018 progress review. The five Sustainable Development Goals (SDGs) under review this year do not involve nutrition directly, but UNSCN believes it is important to highlight the direct and indirect links with nutrition, also in the context of sustainable and resilient communities.

To promote this dialogue between the nutrition community and those sectors representing the SDGs being reviewed, UNSCN organised an expert group meeting in June. This gathering brought together specialists from the areas of water, energy, cities, sustainable production and consumption, and environment to discuss how their sectors could contribute to improving nutrition, and vice versa. Because of the complexity of the issue and the difficulty in achieving policy coherence on nutrition, the participants concluded that there was a need to allow for diversity of food systems, placing people front and centre, with a focus on their needs and, especially, their rights. One food system does not fit all, but if we are to move towards sustainable and resilient communities in which all people can enjoy their Right to Food and have access to a healthy diet, we need to work with a diverse range of local and sustainable food systems. This will require governance structures at all levels that facilitate and foster this diversity. Good governance

is needed to create an enabling environment that gives people access to healthy diets and allows them to select healthy products. It is not just the individual who chooses what to buy, grow or eat; often, their environment plays a decisive role.

This brings me back to this year’s UNSCN News: *Advancing equity, equality and non-discrimination in food systems: Pathways to reform*. The theme for this year underscores UNSCN’s dedication to working to its strengths and bringing added value, as set out in our strategic plan.⁷ It is universal (not limited to specific groups of countries), rights based, focused on the UN system, intent on tackling all forms of malnutrition, determined to promote inter-sectoral analysis and action, and alert to global issues that are relevant at country level.

The theme is also fully in line with the UN System’s responsibilities to the world. The UN Declaration of Human Rights in 1948, the subsequent treaties and resolutions, set out these rights and the associated obligations and responsibilities of the duty bearers. In 2015, the UN agreed, as part of the 2030 Agenda, to eradicate all forms of malnutrition. The UN System, both intergovernmental bodies and the technical agencies, need to work towards these ambitious goals, grounded in a rights-based approach.

UNSCN, as a UN committee, stands ready to lend its continued support to the eradication of all forms of malnutrition, leaving no one behind.

6 <https://sustainabledevelopment.un.org/hlpf/2018>.

7 <https://www.unscn.org/layout/images/Strategicplan.pdf>.

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Editorial

Equity, equality and non-discrimination to guide food-system reform

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INTRODUCTION

In the middle of the last century, malnutrition was still considered a challenge of production. High fertility rates and increasing life expectancies led demographic growth to peak in the mid-1960s. Rapid urbanisation led to an increase in consumer demand for highly processed foods rich in fats and salt and for year-round access to fresh produce. The significant gaps that persisted in food production in certain regions could be filled by an increase in output, it was believed. It was a time when agronomists were deemed to possess the

cure for malnutrition. Increased agricultural productivity was not just one solution to the problem of hunger and poor diets, but the solution. The answer to hunger and malnutrition, it was thought, was to expand Green Revolution technologies: to mechanise production, to rely on external inputs and large-scale irrigation, to promote monocultures and the use of high-yielding varieties of wheat, maize and rice.

As our understanding grew, however, we discovered that only in very few circumstances could hunger and malnutrition be explained by a lack of available food. As Amartya K. Sen pointed out in *Poverty in Famines* – his 1981 essay exploring

some of the most significant food scarcities of the 20th century – most famines (defined as a sudden decline in the ability of people to feed themselves) were not due to a failure of production, but a fall in purchasing power, which allowed certain population groups to control food (Sen 1981).

As researchers delved further into the reasons for malnutrition and poor dietary intake, we discovered that having the ability to access food was only one of the immediate causes. Organisations working with children, particularly the United Nations Children's Fund (UNICEF), highlighted the importance of adequate care and feeding practices to the absorption of food by the body. Health and nutritional outcomes depend as much on care (including breastfeeding, hygiene practices and the adequate storage and preparation of food) as they do on food intake.

A decisive factor in adequate nutrition, therefore, is “the provision in the household and the community of time, attention and support to meet the physical, mental and social needs of the growing child and other family members” (Gillespie and Mason 1991; see also Longhurst and Tomkins 1995; and Haddad and Oshaug 1998).

As knowledge improved about the importance of a lifecycle approach to nutrition, greater focus was placed on the nutritional needs of children in the first thousand days of life. Moreover, beyond the immediate causes of malnutrition, children's organisations zeroed in on its underlying (at household level) and basic causes (at the societal level). Only by examining intra-household relationships and the choices made by the community was it possible to understand why, in a world of plenty, children continued to starve or to have their development stunted (UNICEF 1998; Smith et al. 2003). The political-economic approach to malnutrition was born. It is this approach to food systems that we adopt in UNSCN News 43. It builds on the conviction that we cannot sustainably improve how we produce and consume food without addressing questions of power and of inequality. We still need the agronomists and the nutritionists, but we also need to co-opt the political scientists, the political economists, the environmentalists and the jurists in the fight against hunger and malnutrition.

In addition to improving agricultural productivity, we need to reframe the problem of hunger and malnutrition as a problem of social justice, to address power in food chains, to narrow the divide in social protection schemes and to strengthen the accountability of governments.

EMERGING CHALLENGES

The rise of inequalities

Though the question of the political economy of food systems is not a new one, current trends mean it is particularly urgent that we address it (De Schutter 2017). Inequalities within countries are reaching levels unheard of since the 1930s and, despite all the talk of nations catching up, inequalities between countries remain high (Atkinson 2015; Bourguignon 2015; Stiglitz 2015).

Consequently, social protection systems that are designed to protect the poor from extreme deprivation are being put to the test. In many countries, despite high rates of economic growth and high levels of average wealth, large segments of the population need help. What's more, this comes at a time when public deficits are running high following the considerable injection of liquidity into the financial system in response to the global financial crisis of 2008-2009. This, in turn, has prompted governments around the world to implement fiscal consolidation programmes (so-called 'austerity measures'), at the risk of destabilizing the very social-protection mechanisms that should be shielding the most vulnerable groups of the population from the impacts of the crisis.

Moreover, high levels of economic inequality allow the economic elites to exercise disproportionate political influence. Inequality, therefore, is an obstacle to the adoption of reform – including fiscal reforms and the strengthening of social security – that are essential to the resilience of societies in times of crisis and to the ability of the poor to have access to adequate diets (Alston 2015).¹

These are important concerns linked to the growth of inequalities within nations. Both such inequalities and inter-country inequalities have another consequence that is often ignored: they distort the incentives for production. After all, as long as food supply is driven by market demand (and that is what drives food production, as food is treated as a commodity), it is the purchasing power of the rich, not the essential needs of the poor, that will determine how resources are used - which foodstuffs are produced, under what conditions and for which markets.

¹ Report of the Special Rapporteur on extreme poverty and human rights to the 29th session of the Human Rights Council, paragraphs 17-23.

Prices do not reflect needs. Rather, they are an indicator of demand, as expressed by those with purchasing power: the richer you are, the more you can influence the allocation of resources. As Scitovsky noted, this means that the marketplace is analogous to a plutocracy: it is “the rule of the rich,” he wrote, “where each consumer’s influence on what gets produced depends on how much he spends” (Scitovsky 1992).

In a globalized world, the poor can be priced out of access to resources, while the purchasing power of the rich can steer the direction of agricultural development. This is evident in the surface area given over to the industrial-scale production of soy and maize for animal feed in Argentina and Brazil, and by the deforestation of Indonesia or Malaysia to make way for oil-palm plantations in place of oilseed rape/colza or sugar beet to meet Europe demand. Such distortions are also the price we pay for inequality.

The growing concentration of power in food chains

A second trend is the increase in concentration in all segments of the food supply chains. In the mid-20th century, the problem was primarily associated with the big commodity traders (Archer Daniels Midland (ADM), Bunge, Cargill and Louis Dreyfus), which dominated the international trade networks, particularly when it came to the major cereals. More recently, however, concentration has risen significantly, not just among traders in the middle of the chain, but also at both ends of it.

On the input-supply side, the USD 130 bn merger between US agro-chemical giants Dow and DuPont Pioneer (now Corteva), combined with Bayer’s buyout of Monsanto for USD 66 bn and ChemChina’s acquisition of Syngenta for USD 43 bn (and the planned merger with Sinochem) will result in 70% of the total agro-chemical industry being in the hands of just three mega-companies (IPES-Food 2017a).

On the output-demand side, global retailers are using their superior logistical capabilities and bargaining power in upstream markets to increasingly supply not only rich consumers – 10 supermarkets supply half the food in the European Union, according to recent estimates (Oxfam 2018) – but also the urban middle class in emerging economies (Reardon and Berdegue 2002; Reardon et al. 2003; Reardon et al. 2010).

Moreover, concentration in one segment of the chain leads to concentration elsewhere. Large retailers tend to prefer to source from large wholesalers and large processing firms. This allows them to minimize transaction costs and have ‘one-stop-shop’ access to a greater diversity of products. Invoicing systems become formalized, allowing the retailers to discharge their accounting obligations for value-added tax accounting and product liability. The packaging and branding of products becomes far superior to the level that smaller processors or wholesalers can achieve. This leads to what some authors have called a ‘mutually reinforcing dual consolidation’: the more large retailers dominate consumer markets, the more large commodity buyers dominate the upstream markets.

Imperfect markets are not a new phenomenon, of course; economist Joan Robinson conceptualized such imperfections in the 1930s. However, the positive feedback loops (or self-reinforcing mechanisms) that now exist between the ability of the largest and most powerful players to control the logistics and the networks, and their ability to strengthen their dominant position (as buyers) by extracting favourable conditions from their suppliers or (as sellers) their clients, are now threatening to unbalance the system. Indeed, they are fuelling a race to the bottom, resulting in lower wages for farm workers and less remuneration for independent agricultural producers that supply the raw materials.

Large, dominant buyers can win concessions from the sellers based on their purchasing power, such as discounts on market prices equivalent to the savings made by the seller as a result of increased production, or the passing on to the seller of certain costs associated with functions usually carried out by the buyer (for example, the grading of the livestock or stocking of shelves). And such benefits make it more attractive for the retailers to source from these dominant buyers. This practice further strengthens the position of the dominant buyers, which can gain competitive advantage over less dominant buyers in the downstream markets, giving the larger agribusiness firms supremacy in both the buying and selling markets.

The end consumer may benefit from these trends, both because of the economies of scale achieved by the dominant players and because the abuse of buyer power may lead to lower prices at the end of the chain. However, small food producers systematically lose out. These farmers buy their inputs at retail prices and sell their produce at wholesale prices.

Moreover, as the ever-narrowing group of large firms acts more and more as gate-keeper to the high-value markets of rich countries, small-scale farmers are finding it increasingly difficult to join these supply chains. Consequently, the gap between large and small producers is growing at a time when both are competing for access to resources, credit, influence and political leverage.

Larger producers have easier access to capital and, thus, to non-land farm assets, such as storage, greenhouses and irrigation systems. They can more easily meet the volumes and standards required by the agri-food companies, be they the commodity buyers, processors or retailers (depending on which one is sourcing the products directly from the raw-materials producer). Small farmers can only offset these disadvantages through lower labour costs or by being demonstrably more dependable; small farmers tend to be a less risky sourcing option for buyers, as larger farmers have more market options and can be less reliable.

The disturbing consequence is that small farmers pay a high entry fee into global supply chains. Because of the structural obstacles they face, they can only compete through a form of self-exploitation, for instance, by agreeing to low wages for those (often family members) working on the farm, or by being locked into a situation of high dependency on the buyer. These structural obstacles also limit the ability of small farmers and food producers to be able to provide nutritious diets for themselves and their communities.

Just as economists have been generally uneasy with issues of power (what cannot be quantified cannot be easily counted in the models), governments have been slow to react. With the remarkable exception of the South African Competition Act, antitrust legislation (and the policies of competition authorities) have primarily sought to protect 'consumer welfare', all too often confused with low prices for the end consumer. This has come at the expense of everything else -- including the viability of small businesses unable to compete with the largest players and the livelihoods of the suppliers of raw agricultural products, the individual farmers.

Some jurisdictions have sought to address the most egregious forms of abuse of buyer power by outlawing certain unfair trading practices (UTPs). In April 2018, for instance -- inspired, in part, by the independent Groceries Code Adjudicator² established in the UK -- the European Commission issued a proposal for a directive on unfair trading practices in business-to-business relationships in the food supply chain (European Commission 2018).

However, important though it is to address abuses of buyer power by tackling specific UTPs, this should not be a substitute for ensuring fairness in how prices are set. Perhaps we need to find consensus on the meaning of a 'fair price', just as we found one on a 'living wage' (a measure of fair remuneration) for workers.

Finally, as Galbraith argued in his 1952 best-seller, *American Capitalism*, which documented the rise of large-scale agrifood corporations, neither competition law nor the prohibition of unfair trading practices can fully act as a substitute for what he called the emergence of a "countervailing power": the organization of individual farmers into cooperatives, to improve their bargaining power and allow them to invest in collective goods (from storage facilities to small-scale processing plants), enabling them to capture a larger proportion of the value (Galbraith 1952).

These various strategies, it has now become clear, can and must be combined; competition law and the outlawing of UTPs are important to protect producers from the abuse of buyer power, but both are limited in what they can achieve. Neither should delay the urgent tasks of better organizing farmers and improving the framework of markets in order to ensure that they are more inclusive and socially equitable.

The inertia of mainstream food systems

A third challenge is the inertia of the dominant food system, which is focused on the industrialization of food production and the standardization of consumer tastes. The various components of the food systems have co-evolved. They are the product of a shared history and have now become mutually supportive, resulting in a strong path dependence on past choices.

² The independent Groceries Code Adjudicator, also known as the Supermarkets Ombudsman, is a statutory office responsible for regulating the relationship between supermarkets and their suppliers in the UK and enforcing industry codes of practice.

Investments in research and development and in infrastructure have been made in the interest of export-led agriculture, primarily benefiting the largest agri-food corporations controlling the global supply chains, or (increasingly) these private actors themselves (Naseem et al. 2010). In contrast, the needs of small-scale farmers, producing food crops to feed their own communities or to serve local markets, have been largely neglected.

This is a concern when it comes to the development of new plant varieties, where rewarding private plant breeders by strengthening of intellectual property-rights regimes has largely become a substitute for the funding of public research centres (De Schutter 2011; Howard 2015). It is also an issue in relation to building communication and storage facilities, to agricultural machinery and the dissemination of agricultural knowledge by extension services. One particularly disturbing implication of this bias in developing countries is that the dissemination of technology and the provision of services have ignored the specific needs of women, who face time and mobility constraints and poor access to credit, despite the increased role they are playing in agricultural production in the midst of a rapid agrarian transition (De Schutter 2013).

As labour costs have risen – not only in high-income countries, but also in transition economies (Das and N'Diaye 2013) – and as subsidies have kept the prices of fossil energies artificially low (UNEP 2012), large-scale agricultural production, heavily mechanized and highly dependent on external inputs, remains more competitive than production methods developed on smaller farms practicing a more diversified type of farming. For all these reasons, governments have been tempted to support large-scale, industrial farming, neglecting the diversity of the farming landscape.

They also tend to encourage exports as a means to improve their trade balances, to have access to foreign currency (particularly in the case of poor, indebted countries) and to pay back their sovereign debt. Moreover, as Bates and Lipton have shown, the political elites may be biased towards serving the needs of the urban poor, not only

to buy their loyalty (the urban poor are better equipped to mobilize in protest against high food prices), but also because workers can be paid relatively low wages in the manufacturing sector as long as food prices remain low. The interests of small-scale farmers are easily discounted in such a context, particularly where rapid industrialization is the main objective (Lipton 1977; Bates 1981; Bates 2005).

The situation in high-income countries is almost the opposite, but the end result is very similar. Here, the expectation of cheap food on the part of consumers, combined with farmers' ability to lobby to preserve their interests, has led to a system in which high subsidies remain, mostly going to larger-sized farms. Although the costs to the taxpayer are high and the negative externalities (not taken into account in the price of food) are considerable, it is unthinkable for politicians to campaign on a platform of higher, 'real' food prices, even in the name of better remuneration for farmers and in the interests of health and the environment.

OPPORTUNITIES FOR CHANGE

The growth of inequalities, the increased concentration of power in food systems and the inertia of the mainstream food systems are not only problems in their own right, but they also act as major obstacles to reform. At the same time, however, there are three good reasons to be hopeful that change is underway.

First, the interconnectedness of the various crises affecting food systems is better understood. For more than 50 years now, the almost exclusive promotion of large-scale monocultures has been denounced for its negative environmental effects. Powerful voices – from Rachel Carson in *Silent Spring* in 1962 (Carson 1962) to the UN Environment (UNEP)-led project on The Economics of Ecosystems and Biodiversity (TEEB 2015) – have noted the impacts of the industrialization of agriculture: the loss of biodiversity, the contamination of soils and water, the decline in pollinators, and the increase of greenhouse gas emissions.

What is new here is that this insistence on uniformity and economies of scale is now seen as affecting more than just the environment. It is being associated with the disappearance of smaller-sized farms, which are less adept at achieving economies of scale and would

be better suited to more diversified farming systems (IPES-Food 2016). Furthermore, as Pimbert, Lemke and Rocha note, it is linked to the loss of dietary diversity: the greater prevalence of processed foods is responsible for the growth of non-communicable diseases related to unhealthy diets (IPES-Food 2017a). The alarming pace of climate and environmental change and its effects on food systems, nutrition and health require a major rethink of how food is produced and consumed (UNSCN 2017).

Similarly, public-health advocates have been condemning the marketing of unhealthy foods, particularly to children, and the role of ready-to-eat foods in diets. Others draw our attention to the environmental impacts of these industrially processed foods, as well as to the considerable waste resulting from industrialized food chains. Yet others note how it is low-income families and poor neighbourhoods that are most affected by these trends.

Second, and largely as a result of these interconnections being recognised, the food movement is becoming more integrated. New alliances are being built. Charities and anti-hunger groups now are becoming aware that the low-cost food economy, in addition to being wasteful and energy-intensive, is not benefitting the poor. Although it was meant to ensure at least a steady supply of low-priced food items on the shelves of supermarkets, it has now become clear to them that it is the poor – the very group that this economy was meant to serve – that is the most severely affected by junk and unhealthy foods.

Groups defending peasant agriculture are now joining forces with development organizations to decry the impact on the local markets of developing countries of the dumping of foodstuffs by industrialized countries. Albeit for different reasons and with slightly different priorities, both constituencies are challenging export-led agriculture and the globalization of food supply chains, which force farmers from all over the world to compete against one another in a never-ending race to the rationalization of production, increases in scale and cost cuts. Politicians of all stripes are expressing concern about the rising costs of healthcare linked with obesity and associated diseases, and they are now seeing such concerns being echoed by proponents of food sovereignty and agroecology.

Third, participation and accountability in food systems are gradually being institutionalized. As documented by Nadia Lambek in her contribution to this edition of *UNSCN News*, a growing number of states have adopted legislation or policy frameworks with a view to introducing elements of food democracy and to involving civil-society groups in the design and implementation of food policy.

Largely thanks to the revival of the Right to Food in the 1990s and of the pressure on states to help realize the Right to Food, small farmers at last have a say in the choices that affect them. These food producers are finding a common ground with parents who insist that school canteens serve healthier food, with consumers concerned about the impacts of processed foods and with environmentalists emphasising the urgency of switching to more sustainable forms of food production.

Starting in North America, but now increasingly in Europe and other regions, food-policy councils are emerging: consultative bodies, whether self-instituted at the initiative of ordinary citizens or established by municipalities or states, are reclaiming control over local food systems, providing recommendations for more sustainable and healthier food production and consumption.

Cities are taking the lead. Launched in October 2015, the Milan Urban Food Policy Pact brings together more than 160 municipalities that have committed to rebuilding local food systems, to strengthening urban-rural linkages (as encouraged by Target 11a under Goal 11 of the Sustainable Development Goals) and, more generally, to developing “sustainable food systems that are inclusive, resilient, safe and diverse, that provide healthy and affordable food to all people in a human rights-based framework, that minimise waste and conserve biodiversity while adapting to and mitigating impacts of climate change” (Milan Urban Food Policy Pact 2015: para. 1). It is at this level of governance, increasingly, that the centre of gravity of political imagination lies.

This issue of UNSCN News brings together a number of papers that address questions of equity and non-discrimination in food systems. Together, they illustrate the usefulness of such a political-economic approach. They identify several problems: the persistence of inequalities, the continued concentration of power and the delay in reforms. However, they also point to many solutions that lie in the hands of both politicians and social actors.

It is our hope that they can provide a source of inspiration for both policymakers and for all of us as eaters. “There are no passengers on Spaceship Earth”, Marshall McLuhan once said. “We are all crew.”

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Political Economies

Inequality and malnutrition

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INTRODUCTION

Global commitments to tackle malnutrition are rooted in the conviction that every human being has a right to adequate food and nutrition, and that not realizing this right makes other fundamental rights more difficult to uphold (right to survival, right to development, right to health). While there has been significant progress on reducing poverty and hunger at the global level in recent decades, malnutrition remains a day-to-day crisis, with one in three people malnourished in one form or another.

Efforts to address malnutrition have focused largely on reducing the number of people who are undernourished. Unfortunately, progress has been slow and not evenly paced across regions and population groups. Furthermore, in 2017, the UN Food and Agricultural Organization (FAO) confirmed that the number of people globally without access to adequate calories in the world has increased since 2015, reversing years of progress. Today, 815 million people are still chronically undernourished (up from 777 million in 2015), with 151 million children under five stunted, 51 million afflicted by wasting (UNICEF et al 2018) and 2 billion people suffering from micronutrient deficiencies (Development Initiatives 2017).

At the same time, the world is facing a new challenge: the increasing number of overweight and obese people. Nearly two billion adults are overweight and obese (Development Initiatives 2017), while 38 million children under the age of five are overweight (UNICEF et al 2018). Malnutrition has thus become a major issue in both developing and developed countries. Indeed, several forms of malnutrition often affect the same country, community or household, even the same person.

In response, the promotion of good nutrition has gained momentum over the last 10 years. The international community has made numerous commitments and adopted various targets, while more and more people have begun to recognize the importance of the challenges posed by malnutrition.¹ As a follow-up to the Second International Conference on Nutrition (ICN2), in 2016, the UN General Assembly proclaimed 2016-2025 the United Nations Decade of Action on Nutrition.²

¹ In 2012, the World Health Assembly (WHA) adopted the 2025 Global Targets for Maternal, Infant and Young Child Nutrition, followed by targets for non-communicable diseases in 2013. The same year, at the first Nutrition for Growth Summit, donors committed USD 23bn to actions to improve nutrition. At the second International Conference on Nutrition in 2014, more than 170 governments committed to establishing national policies aimed at eradicating malnutrition and transforming food systems to make nutritious diets available to all and proposed launching the UN Decade of Action on Nutrition (2016-2025).

² The UN Decade of Action on Nutrition is a commitment by Member States to undertake 10 years of sustained, consistent implementation of policies and programmes, following the recommendations and commitments of the ICN2 Framework for Action and the 2030 Agenda for Sustainable Development.

Inequity, which can be defined as 'unfairness of opportunity', and the resulting inequalities (defined as differences and disparities in an individual's living conditions) play a significant role in the deterioration we have seen on the nutritional front. Indeed, the world is more unequal today than at any point since the 1940s (United Nations Development Programme (UNDP) 2013) and inequalities in various aspects of human life have been impeding progress in human development, nutrition, health and education for large sections of the world's population.

Agenda 2030 addresses malnutrition explicitly in Sustainable Development Goal 2: *End hunger, achieve food security and improved nutrition and promote sustainable agriculture*. However, it also includes a specific goal on inequalities, Goal 10: *Reduce Inequalities within and among countries*. "Leaving no one behind" is a key principle of the post-2015 framework. It calls for the implementation of the 2030 Agenda to target all people, without bias or discrimination, to go beyond 'averages' and address inequalities of opportunity and outcome. The idea is to meet the Agenda's goals for everyone, regardless of gender, race, caste, ethnic group, class, religion, disability, age, geographical location, sexual orientation and identity, health or any other status. Furthermore, the post-2015 framework is designed to prompt action towards realizing food and nutrition *for all*, meaning that everyone should have access to an adequate diet that is healthy, nutritious, affordable and culturally appropriate.

If we analyse the four dimensions of food security (availability, access, utilization and stability) through an 'equity' lens, we can see how different forms of inequality affect malnutrition and how they contribute to other inequalities, perpetuating a vicious circle. Though there is strong evidence of various nutrition-specific interventions successfully addressing malnutrition, per The Lancet's 2008 Maternal and Child Nutrition Series, these have been shown to be insufficient to eradicate it. Clearly, new solutions are needed that go

beyond targeted, nutrition-specific interventions and the health sector.³

Inequality is a multidimensional phenomenon that is not exclusively about income and wealth. Focusing excessively on the economic aspects can mean overlooking inequalities in other areas of life that significantly contribute to a person's wellbeing. For example, according to a study conducted in six Latin American countries (Brazil, Colombia, Ecuador, Guatemala, Panama and Peru), the combined effects of gender, race/ethnicity, birthplace, parental education and father's occupation account for between 25% (Colombia) and 51% (Guatemala) of inequality in consumption (Melamed and Samman 2013).

It is now widely recognized that food and nutrition insecurity is not only a question of food scarcity, but also unequal and/or unfair access to food, among other things. This, in turn, stems from inequalities of income, unequal access to resources, gender and social inequalities and inequality of economic and political power. The significant disparities in food security that persist in and between countries are thus the result of inequalities at play beneath the surface (High Level Panel of Experts on Food Security and Nutrition (HLPE) 2014). Fundamental aspects of daily life – first and foremost education, but also other human rights – are strongly influenced by and linked to inequality, with a direct, demonstrable influence on the health and development of the human being.

ICN2 calls for a systemic approach to tackling malnutrition in all its forms, but what are the systemic lock-ins that propagate inequity, and how can we address them?

While focusing not only on income and wealth inequalities, this article tries to highlight the negative impacts inequalities have on the nutritional status of individuals and calls for increased attention to inequalities in access to resources and political power, in other terms, inequalities of opportunity.

According to Amartya Sen's capability approach, for instance, income remains important, as it helps to determine what people can be or do, but there are many other factors that are also relevant. Sen defines capabilities as "the substantive

³ According to The Lancet's 2008 *Maternal and Child Nutrition Series*, 34 countries account for 90% of global malnutrition, but scaling up 10 nutrition-specific interventions to 90% coverage in these countries would only reduce stunting by 20%.

freedoms [a person] enjoys to lead the kind of life he or she has reason to value" (Sen 1999, p.87); an unequal distribution of capabilities is what we call 'inequity'.

This paper is also part of a broader project aimed at analysing secondary data from a sample of countries to glean empirical evidence of inequalities as underlying drivers of malnutrition.

EQUITY, EQUALITY AND A PEOPLE-CENTRED AGENDA

Over the last few decades, the issue of equity has been gaining traction among the international community and development practitioners. We now see a drive to address first the needs of the most marginalized and deprived, rather than broad-brush attempts to reach greater numbers of people.

The challenges of inequity remain in every country and region, however, with certain groups of people being left behind as the world moves forward.

Inequality refers to differences, variations and disparities in the living conditions of individuals and groups; inequity adds a moral dimension to the situation, referring to the process by which certain results are produced, to the way in which wealth is distributed and to how needs are assessed and addressed (Norheim and Asada 2009). Equity focuses on opportunities rather than outcomes; it refers to how capabilities (for example access to health, education and good nutrition) are distributed within a certain group of individuals.

Inequalities in areas such as access to public services can also limit the potential of an individual to fulfil his or her capabilities; we refer to such cases as inequalities of opportunity. When we talk about inequalities of opportunity, we are moving into the domain of 'equity'. Indeed, if people

within a given society have equal capabilities, this does not necessarily mean they will see equal outcomes, as people have different preferences and values. However, unequal outcomes will not then be the consequence of unequal distribution of resources (inequality) or opportunities (inequity), but of personal choice (Melamed and Samman 2013).

Inequalities can be classified along vertical and horizontal lines. Vertical inequalities are based on measured outcomes at household level (such as income), while horizontal (or group-based) inequalities affect certain groups of people, who are left behind due to social exclusion (Norton et al 2014). In addition, recent approaches to inequality have tried to pinpoint intersecting inequalities to capture the combination of multiple disadvantages affecting certain groups (for example, forms of identity that are ascribed from birth and are relatively immutable, such as race, gender, caste and ethnicity) (Kabeer 2010). As well as poverty, excluded groups often face discrimination based on socially marginalized identities, with gender featuring in each group; the overlap of different forms of disadvantage faced both by individuals and groups only reinforces their exclusion. Thus, the intersection of group differences can yield some of the most extreme forms of societal exclusion; a person's ethnic identity, gender and spatial location can all interact in ways that exclude him or her from a country's economy, political system and social life.

Intersecting inequalities exist not only in low-income and developing countries, but also in developed ones. There are numerous examples of how factors such as poverty, ethnicity, race and geography collide to hinder access to healthy and adequate diets for certain groups of people in wealthy, developed countries. In the US, for instance, studies into unequal access to food retailers show that residents of rural areas or low-income and minority neighbourhoods are most affected by poor access to large food stores, which tend to have a greater variety of food and affordably priced healthy options. This has a significant impact on nutritional and health disparities.

Economic and political debate on inequality has always been focused largely on income or wealth distribution. However, as stated by Atkinson (2015), "income is only one dimension, and differences in income should be interpreted in the light of differing circumstances and of the underlying opportunities" (Atkinson 2015, p.14). Indeed,

although inequality of results (measured in economic terms) and income inequality, in particular, are often considered to be the primary dimension of food security and nutritional issues, economic inequalities are often the result of other inequalities – social inequalities, unequal access to resources, spatial inequalities, inequalities of power, education and health, and gender inequalities. Moreover, consensus is building that economic growth is not sufficient to reduce poverty if it is not inclusive and does not involve the three dimensions – economic, social and environmental – of sustainable development.⁴

Addressing inequalities, therefore, means looking at both equality of opportunity – equity – and other entrenched structural factors, including discrimination, all of which influence equality of outcome. If we focus only on the ‘symptoms’ and manifestations of poverty, hunger or exclusion, rather than on their structural causes (for example, discrimination, lack of access to resources, lack of political power), we will repeat the errors of the past (such as with the Millennium Development Goals, in which there was no focus on inequality) and only address short-term needs without tackling the determinants of exclusion. To be as inclusive as possible, attention should be paid to those underlying economic, social, cultural and spatial causes of inequality and hunger, while actions and strategies should be rooted in human rights principles and be part of a people-centred development agenda (United Nations Economic Commission on Europe (ECE) et al 2012).

INEQUALITIES AS UNDERLYING CAUSES OF MALNUTRITION

Income inequality is one of the major underlying causes of malnutrition. According to World Bank estimates, 702 million people were living on less than USD 1.90 a day as of 2015, many of them smallholder farmers struggling to live and feed their families. The poor access to water and adequate sanitation that comes with such poverty clearly contributes to disease and inadequate dietary intake at the individual level. Still, higher income does not necessarily guarantee adequate nutrition in and of itself; how it is distributed, especially at household level, also determines the nutritional outcome (Save the Children 2016b). For example, higher income in the hands of a woman is likely to have greater positive effects on a household’s nutritional status than higher income in the hands of a man, as the woman tends to be more empowered and better able to make choices that matter to the family as a whole, thus lessening some of the causes of malnutrition.

Income can, of course, offset inequalities of access to resources, though not always. Income inequality can lead to greater imbalances in food and nutrition security, too. For example, growth in global demand for food and the evolution of diets brought about by higher incomes in the wealthier sections of the global population lead to higher prices and purchasing-power disparities for the poor, which translate into food and nutrition insecurity (HLPE 2014).

Gender inequality is a critical issue. It is not only one of the major causes of restricted access to nutritious food, but it intersects with other underlying reasons for malnutrition, such as education, child health and care practices, pregnancy, gender-based violence, opportunities in public and political life, and unpaid and unrecognized domestic work. It overlaps with almost all other forms of inequality, worsening the negative effects and perpetuating the vicious circle of inequality.

Gender discrimination can lead to differences in feeding practices and food intake. Intra-household dynamics often contribute to discrimination against women and girls, who tend to be most affected by malnutrition and infectious disease. The transfer of malnutrition from mother to child is another key aspect, as vulnerability, exclusion and malnutrition can pass from one generation to the

⁴ <http://www.un.org/sustainabledevelopment/inequality/>.

next. Research by Young Lives shows that children of a stunted mother are at greater risk of being stunted and underweight, and that this risk increases if the mother is an adolescent (Benny et al 2017).

Gender inequality also affects women's productive capacity. Women are often denied access to land and other resources, but data on the links between agricultural production, adequacy of diets and health and nutritional outcomes suggest that the gender issue should be given more substantial consideration in a nutritional context (Asian Development Bank 2013).

Women's empowerment is generally considered crucial to improving nutritional outcomes. They are primary caregivers and educators, they cook and usually control household resources. The latter is particularly important, as it has been proved that the gender of the person with access to and control over resources can influence the extent to which they are allocated to benefit health and nutrition outcomes (van den Bold et al 2013). In Sierra Leone, for example, the hierarchical and gender structures of households are deemed to be key drivers of malnutrition, because of their impact on household nutrition-related decisions (SLRC 2014).

Geographical and regional inequalities have significant effects on nutrition, as group-based exclusion is often determined by the place where people live. Spatial and territorial inequalities are high and growing, with disparities between rural and urban areas, and geographically advantaged and disadvantaged regions. A study by Save the Children in 2016 found that children living in rural areas were more likely to be stunted than those living in urban areas in 52 of the 56 countries sampled (Save the Children 2016b).

Differences in infrastructure, food systems and services in certain areas/regions of the same country, whether due to remoteness, difficult terrain or regional conflict, may thus have negative effects on health, nutrition and educational outcomes (Save the Children 2016a). Rapid urban growth in developing countries and informal settlement expansion are also correlated with an increase in undernutrition in urban populations. Spatial inequalities, too, can contribute to an increase in malnutrition through the creation of 'food deserts' or 'food swamps', as in low-income areas of the United States. Food deserts can be defined as those parts of a country that are poor in fresh fruit, vegetables and other healthful wholefoods, usually in impoverished areas. This is largely due to a lack of grocery stores, farmers' markets and healthy food providers (HLPE 2017). Food swamps are regions where unhealthy foods are more readily available than healthy foods. Territorial inequalities can be a major contributor to overall inequality in countries, especially when they overlap with disparities of a racial, ethnic and/or power-based nature.

Disability is closely connected with malnutrition, too, as disability is both a source and a consequence of it. Several types of disability can be caused by a lack of micro- or macronutrients, or exposure to high concentrations of antinutrients. At the same time, having a disability can also lead to malnutrition, due to decreased nutrient intake, increased nutrient loss and the need for additional nutrients, which can put children at risk of further complications. Also, countries with high levels of malnutrition and nutrient deficiency often report higher rates of disability and developmental delays (Groce et al 2013).

Disability, and the social and cultural barriers arising from it, can affect the nutritional status of a person. Impairments can not only be a direct cause of malnutrition, but also lead to the exclusion of those affected by them from social groups, even their own families. Disabled people and children often receive less care, smaller portions and less nutritious food, as they cannot contribute to the wellbeing of the family/group to which they belong. In addition, malnourished people with disabilities often live in the most disadvantaged areas and can be difficult to reach (if they are even known to exist) from a policy or project perspective (Groce et al 2013).

Ethnicity. Groups that face discrimination and marginalization in society (religious minorities, caste system, indigenous people) usually have more limited access to basic services, such as healthcare and education, have a poor energy and nutritional intake, and are more exposed to unfavourable socioeconomic and environmental conditions. All these factors contribute to disparities in the prevalence of malnutrition between people in different ethnic groups. In a 2016 sample of 48 countries with data available on ethnicity, children in most disadvantaged ethnic groups have, on average, 2.8 times the rate of stunting and six times the rate of wasting of their more advantaged peers (Save the Children 2016b). Concrete examples also exist in developed countries: for example, almost one-third of young Americans are either overweight or obese, with the rates highest and rising fastest for Hispanic, African-American and Native American youths living in low-income communities (Larson et al 2008).

Power inequalities. Societies are characterized by power structures that often help to promote coexisting inequalities and can influence development strategies. For example, 'equity' tends to be wrongly interpreted as 'inclusion', meaning those who live at the margins may receive basic social services and slightly higher incomes, but not see any change in the underlying power dynamic (Prato 2014). Resolving inequalities of power requires better governance, including more inclusive social participation and empowerment, and greater government efforts to ensure that fundamental human rights are being met, including the right to adequate food.

Power structures and political relations shape numerous aspects of society, including a country's agricultural and trading systems, thus determining the nutritional quality of the food available (Beyond 2015 (2012)). At the same time, they set the course of food distribution and production, influencing the accessibility of various foods for different sectors of the population.

Power inequalities intersect with all the other types of inequality, reinforcing them and perpetuating the vicious circle that traps and locks in those left behind. Indeed, if

we consider all the different elements of human life and wellbeing – especially nutrition as a fundamental right – it is clear that in our interconnected and globalized world, every single aspect can be influenced and distorted by power inequalities. Gender, ethnicity, geography, income and disability are all affected by power imbalances at the global level (politics, international relations and trade often neglect sectors of the population), which then trickle down until they reach the local and individual levels.

Poor people, especially, often experience unfairness on several levels and these multiple inequalities interrelate and overlap to create mutually reinforcing cycles of disadvantage that are transmitted across generations (UNDP 2005). In this way, different forms of inequality come together to shape people's opportunities in life and are usually transmitted from one generation to another. As Bird concludes, a complex set of positive and negative factors can be transferred between generations, such as high dependency ratios, health shocks, maternal nutrition and health status, access to assets, education (especially for women) and conflicts (Bird 2007).

To understand who is most vulnerable to malnutrition, it is therefore imperative to understand the causes and the consequences. Discriminatory perceptions can lead to the undervaluation of the contributions, needs or abilities of disadvantaged groups, with an impact on their food and nutrition security (Fanzo 2015).

CONCLUSION: CAN WE BREAK THE CYCLE?

While a lot has been done to reduce the number of people affected by malnutrition and while there are vast numbers of studies aimed at identifying the characteristics of malnutrition and the issues associated with it, we believe that the issue has still not been entirely understood and addressed – and this is at the heart of our research. We can tackle individual cases of malnutrition effectively through direct intervention, but to break the vicious circle of poverty and hunger at a large-scale level, more needs to happen.

It is here that inequity and inequality come into play as underlying causes of malnutrition. We have discussed how unequal opportunities, differing capabilities and intersecting inequalities coalesce to create the conditions for exclusion and discrimination, hampering the eradication of malnutrition. Consequently, targeting only the immediate causes of malnutrition may not be the way to eliminate all forms of malnutrition. While nutrition-sensitive intervention can address some of the underlying and basic causes of malnutrition, it cannot be completely successful if policymakers, development practitioners, non-governmental organizations (NGOs) and international institutions continue to operate without considering the roles that inequity, inequality and marginalization play in fuelling malnutrition and poverty. We will not achieve the SDGs and meet global nutrition targets if we overlook some of the affected population and leave them behind.

The lack of disaggregated data and the failure, in most surveys, to move beyond household-level data, play a

fundamental role in this regard. How can we evaluate our nutrition-specific and nutrition-sensitive interventions, for instance, if we do not look at intra-household dynamics (dictated by disability, gender and/or power inequalities) and their impact on access to food? The analysis of secondary data from a selection of developing countries shows that effective policies to reduce malnutrition, or at least undernutrition, should focus on education, health and sanitation services, while taking into account factors such as gender and residence as important determinants of positive outcomes (for example, women and their education should be at the centre of targeted nutrition interventions, as well as rural household sanitation services).⁵

Addressing discrimination and the structural and underlying causes of inequality and hunger to unlock established systems implies transformational change: greater emphasis on inclusive, sustainable and people-centred development; better tools for monitoring and implementing a broader set of policies on economic, social and cultural rights; better data; decentralization and greater participation to enhance social justice and fuel investment in those who are marginalized and excluded; a strengthening of the capacity, accountability and transparency of governments, enabling them to push, when needed, for local solutions for local people; and stronger governance and implementation of the rule of law at all levels.

Only when governments and policymakers have a clear picture of the whole system, from causes to strengths and lock-ins, will it be possible for them to design effective solutions. Malnutrition is also a political problem and to achieve SDG2 and eradicate all forms of it, we need to follow an evidence-based, human-centred approach, and be able to rely on precise and disaggregated data and strong political will as the basis for effective decision-making.

⁵ As mentioned, this paper is part of a broader study that includes analyzing secondary data from a sample of developed countries. Our analysis shows that indicators reflecting different types of inequality (income/wealth, gender, health, education, etc.) are the ones that better explain the variability of child undernutrition. Overweight and obesity have not been considered in the initial phase of this study, nor has adult malnutrition, due to a lack of reliable and disaggregated data.

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Framing the nutrition problem: The political-economic obstacles to healthier diets

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INTRODUCTION

Feeding a growing population with integrity is not an easy task, but a necessary one. It requires safe, nutritious and culturally appropriate foods to be made available and accessible to everyone, wherever they live in the world. It requires food to be produced, obtained and consumed in environmentally sustainable ways without compromising people's health, dignity, self-respect and human rights.

In many ways, current food systems are failing in this regard. For example, in its 2017 report, *Unravelling the Food-Health Nexus*, the International Panel of Experts on Sustainable Food Systems (IPES-Food) identified five key channels through which food systems are making people sick: (1) they work under unhealthy conditions; (2) they are affected by contaminants in water, soil or air; (3) they eat foods that are unsafe for consumption; (4) they have unhealthy diets; or (5) they are food insecure and can't access adequate, acceptable foods at all times (IPES-Food 2017).

The global human and economic costs associated with these health impacts are high and growing. Recent estimates put the expense associated with foodborne illnesses at USD 14bn per year (Hoffman et al 2012), with obesity at USD 2trn (McKinsey Global Institute 2014) and with malnutrition – encompassing wasting (acute malnutrition), stunting (chronic malnutrition) and micronutrient deficiencies – at USD 3.5trn (FAO 2013). The scope, severity and cost of these issues could undermine the historical progress made on tackling problems like hunger, foodborne illness and workplace injury.

The health of low-income and other marginalized groups is consistently and disproportionately affected through all these channels. Furthermore, the problems challenging the integrity of food systems are often interconnected and self-reinforcing, such that populations more likely to work under unhealthy conditions (e.g. migrant agricultural workers) are also often more at risk of being hurt by environmental contaminants, eating foods unsafe for consumption, having unhealthy diets and being food insecure. Thus, devising healthier food systems requires overcoming barriers to equitable and non-discriminatory access to good food and nutrition.

In this paper, while recognizing the interconnected pathways by which health is affected, we focus on one of those channels: unhealthy dietary patterns. Based on the IPES-Food 2017 report, we attempt to identify the main factors leading to the growing prevalence of unhealthy diets around the world. We then look at some of the issues holding back our understanding of health impacts and our ability to address them. In particular, we look at evidence gaps and biases, the prevalence of 'nutritionism' and unhealthy food environments, and the role of the food industry in influencing the framing and understanding of the nutrition problem. A few conclusions are offered at the end of the paper.

UNHEALTHY DIETARY PATTERNS

Unhealthy dietary patterns have become increasingly prevalent in recent decades – a trend that has been accompanied by growing rates of overweight, obesity and non-communicable diseases (NCDs) worldwide. Indeed, the growing prevalence of obesity is a global health concern, as it heralds increasing incidence of several debilitating diseases, including type 2 diabetes, hypertension, coronary heart disease, metabolic syndrome, respiratory conditions, cancer and osteoarthritis, as well as reproductive, gall-bladder and liver diseases (Butland et al 2007; Grundy 2016; Wang et al 2011).

Overweight and obesity have reached epidemic levels in many countries. Since 1975, the worldwide prevalence of obesity has nearly tripled, with 39% of adults estimated to be overweight and 13% to be obese in 2016 (WHO 2017). Among children, 38 million under the age of 5 (UNICEF, 2018) and over 340 million under the age of 18 are now overweight or obese (WHO, 2017). In a 2014 report, the McKinsey Global Institute concluded that, if trends continue on their trajectory, almost half of the world's population will be overweight or obese by 2030. Furthermore, based on disability-adjusted life years (DALY) data, obesity has roughly the same economic impact (about USD 2trn, or 2.8% of global GDP) as smoking or the combined costs of armed violence, war and terrorism (McKinsey Global Institute 2014).

NCDs are now the leading cause of death globally, with 71% of all deaths (WHO 2018). Each year, 15 million people die from a NCD prematurely (before the age of 70) and could probably have been prevented with appropriate lifestyle changes, including the adoption of healthy diets (WHO 2014). The global prevalence of diabetes (closely linked with the rise in obesity) is estimated to be 6.4% among adults aged 20-79 years. The International Diabetes Federation

(IDF) estimates that by 2040, one in 10 adults globally will have type 2 diabetes (IDF 2015).

While some specific high-risk foods can be identified, it is diets in their entirety and overall balance that are increasingly being associated with health impacts. Healthy diets are generally considered to include a diversity of nutrient-rich foods, such as vegetables, fruits, whole grains, and pulses (beans, legumes, nuts and seeds), modest amounts of meat and dairy (for non-vegetarians or vegans) and unsaturated vegetable oils (Global Panel on Agriculture and Food Systems for Nutrition (GLOPAN) 2016). Conversely, unhealthy dietary patterns are characterized by foods high in added sugar, sodium, saturated fat and trans fat, and low in fruit, vegetables, pulses, whole grains and nuts. There is consistent evidence that healthy dietary patterns are associated with lower risks of cardiovascular disease (U.S. Department of Health and Human Services (HHS) and U.S. Department of Agriculture (USDA) 2015). Meanwhile, unhealthy dietary patterns have been identified as a risk factor for a range of NCDs, both directly and by contributing to obesity (Kaveeshwar and Cornwall 2014).

A growing body of research highlights the role of particular foods in unhealthy dietary patterns.

- **Increased consumption of sugar-sweetened beverages (SSB)** has been singled out as a significant contributor to the obesity epidemic in recent years (French and Morris 2006; Malik et al 2006; Popkin and Hawkes 2016; Taylor and Jacobson 2016; Vartanian et al 2007; WHO and FAO 2003; World Cancer Research Fund and AICR 2007). By one estimate, soda had become the single largest energy source in the American diet by 2006 (Mattes 2006). Systematic reviews have paved the way for SSBs to be identified as a major risk factor for long-term weight gain and non-communicable diseases (Hu and Malik 2010; Malik et al 2006; Morenga et al 2013; Sonestedt et al 2012; Swinburn et al 2004), including cardiovascular mortality (Thornley et al 2012; Yang et al 2014) and type 2 diabetes (Basu et al 2013). More broadly, high intake of added sugars has been associated with hypertension, high blood cholesterol, higher blood pressure and type 2 diabetes, leading the WHO to recommend limiting the consumption of free sugars to 5% of total energy intake (WHO 2015).
- **Overconsumption of animal products** has been connected with heart disease, diabetes and various cancers (Feskens et al 2013; Green et al 2016; Melnik 2012; Oggioni et al 2015; Tilman and Clark 2014). Specific types of meat have also been associated with increased NCD risk.

Following reclassification in 2015, the WHO considers processed meats (such as hot dogs, ham, sausages, corned beef, canned meat and meat-based sauces) to potentially cause colorectal cancer and be associated with stomach cancer (IARC 2015). It also considers red meat (i.e. all muscle meat, such as beef, veal, pork and lamb) to be linked to colorectal, pancreatic and prostate cancers (IARC 2015).

- Overall, **the increasing proportion of ultra-processed foods in diets** has been identified as a driver of excess energy intake (Monteiro 2010). Ultra-processed foods are defined as “industrial formulations which, besides salt, sugar, oils, and fats, include substances not used in culinary preparations, in particular additives used to imitate sensorial qualities of minimally processed foods and their culinary preparations” (Steele et al 2016). Often consumed in large portion sizes and by nature high in fats, sugar and salt, ultra-processed foods have been associated with obesity, chronic diseases and other markers of poor health (Ludwig 2011; Monteiro et al 2012; Moodie et al 2013; Moreira et al 2015; Stuckler et al 2012).

A proliferation of ambitious policy actions in the past few years suggests that the public health challenge surrounding overweight and obesity is being taken more and more seriously. For example, soda or sugary-drink taxes have been put in place in several countries and jurisdictions, legal limits or outright bans are being introduced on the use of trans fatty acids and recommendations for avoiding ultra-processed foods are part of official dietary guidelines. However, while the quantity of evidence is extensive, major challenges clearly remain in terms of forging the understandings that will pave the way for sustained action to tackle the obesity and NCD epidemics.

EVIDENCE GAPS AND BIASES

Social and geographic discrepancies are embedded in global food systems when it comes to power, visibility and exposure to risks. The Global South is disproportionately affected by the most severe health impacts. In rich countries, the groups that are most socioeconomically disadvantaged are the worst affected. This geographic clustering of poverty and poor health means that large swathes of the population – including those with the greatest power and influence – are physically removed from some of the gravest health problems. Moreover, the availability of data varies

greatly from region to region, with information tending to be less complete for countries in the Global South. These blind spots and hidden afflictions make it less likely that problems will be prioritized politically, allowing health risks to continue accruing among marginalized populations. Even wealthy countries are witnessing a vicious circle, in which the health conditions of marginalized populations are often poorly documented, researched and addressed, reinforcing the social-health inequalities between different groups in society. For example, the health status of indigenous groups in North America has been frequently overlooked by mainstream research (Eldridge et al 2015; Wilson and Young 2008).

The full extent of the health burden is also obscured by deficiencies in healthcare provisions in poorer countries. Cardiovascular diseases are the leading cause of death worldwide, but sudden deaths from heart attacks are more common in developing countries. In these cases, devastating impacts occur “with no lingering burden on the health system” (Chan 2016). Similarly, for cancers, expensive treatments are not available or accessible to most people around the world. As a result, the current costs associated with these diseases in developing countries are much lower than they would be if high-quality healthcare were more broadly available around the world. These discrepancies may allow the focus to remain on developed countries, where the major costs are amassed and counted – thus potentially downplaying the global and systematic nature of the obesity epidemic and the ‘double burden’ of undernutrition and overweight increasingly being experienced by low- and middle-income countries.

Systemic blind spots, therefore, undermine our ability to get a full picture of the health impacts in food systems. Much of the available evidence relies on data gathered in North America and Europe, published primarily in English-language journals in those regions. This threatens to downplay the extent of a specific health impact in the Global South relative to the Global North and allows the framing of the key health impacts in global food systems to be disproportionately based on understandings from the Global North.

'NUTRITIONISM' AND FOOD ENVIRONMENTS

Debates on diets and nutrition are particularly vulnerable to framing that obscures key connections and undermines the basis for comprehensive understanding and systemic action to address health risks in food systems. In many development schemes and research programmes, the focus has been placed on single nutrients through supplementation, fortification and biofortification, with little emphasis on durably improving people's access to diverse diets (Frison et al 2006; Burchi et al 2011).

A focus on single nutrients also pervades discussions on dietary guidelines. These approaches have been criticized for promoting 'nutritionism' – the reduction of food's nutritional value to its individual nutrients – at the expense of broader understandings and more systemic solutions. For some, nutrient-focused guidelines are a legacy of a time when micronutrient deficiencies were the primary concern, but have become inadequate in addressing issues of overweight, obesity and NCDs (Jessri and L'Abbe 2015; Mozaffarian and Ludwig 2010). A focus on single nutrients also paves the way for multinational food companies to use "nutritional positioning" to bolster their power and influence (Clapp and Scrinis 2017, p.578).

A tension can also be observed between attempts to frame diets as a function of broader food environments and persistent narratives suggesting that diet-related health is simply a question of personal responsibility. These narratives, though they remain dominant, have been increasingly challenged in recent years. Consumer food choices have been progressively understood in the context of the 'food environment': the "collective physical, economic, policy, and sociocultural surroundings, opportunities, and conditions that influence people's food and beverage choices and nutritional status" (Food Foundation 2016, p. iii).

From this perspective, the availability of specific types of food in specific settings (e.g. schools, neighbourhoods) and a range of socio-economic and lifestyle factors (e.g. the growth of out-of-home dining) have been emphasized as drivers of dietary shifts, leading to higher consumption of prepared foods high in added sugars, sodium and fats (Caraher and Coveney 2004; Drewnowski et al 2004; Lake and Townshend 2006; Lobstein et al 2004; Neff et al 2009; Swinburn et al 1999). Vicious circles have been identified within unhealthy food environments. For example, increased consumption of highly processed foods has been found to contribute to (and be reinforced by) a gradual loss of food skills and food knowledge, reduced personal creativity and control over daily meals, and inhibited awareness of food ingredients and their health value (Engler-Stringer 2010; Jaffe and Gertler 2006; Larson et al 2006; Smith et al 2013). Refocusing attention on the food environment, therefore, significantly changes the framing of the diet question, leading to different types of inquiry and different types of policy.

THE ROLE OF THE FOOD INDUSTRY

There is increasing evidence of the role of some corporations in the agri-food industry in influencing debates surrounding nutrition (Brownell and Warner 2009; Nestle 2016; The PLoS Medicine Editors 2012). Major discrepancies have been found, for example, between the results of industry-funded and non-industry-funded studies on the health impacts of sugar consumption and SSBs (Bes-Rastrollo et al 2013; Vartanian et al 2007). Explicit attempts since the 1960s to divert attention from sugar to fat as a heart-disease risk factor were recently uncovered and are deemed to have significantly derailed decades of medical research on sugar (Kearns et al 2016; O'Connor 2016). Popkin and Hawkes (2016) conclude that it is only studies funded by the sugar and beverage industries that continue to cast doubt on the evidence (shown through extensive meta-analyses) of substantial weight gain and cardiometabolic risks from SSBs.

Industry funding of professional associations has also been alleged to heavily influence the framing of prominent public debates (Nestle 2013; Simon 2013 and 2015). The scientific objectivity of the American Society for Nutrition (ASN) and the Academy of Nutrition and Dietetics (AND), for example, has been called into question on the basis of strong ties to the food and beverage industry (Simon 2013 and 2015). This has major implications, as the ASN is the publisher of three widely read nutrition science journals, the American Journal of Clinical Nutrition, the Journal of

Nutrition and Advances in Nutrition, in which many industry-funded studies are published. Meanwhile, the Nutrition Fact Sheets produced and publicized by the American Dietetic Association (ADA) have been called into question on the grounds of industry partners having paid for the right to co-write them (Brownell and Warner 2009).

Industry influence over the framing of the research agenda and the terms of the broader scientific debate has also been identified through a range of additional practices: employing individual researchers as consultants, or inviting them to sit on company boards in order to signal objectivity and legitimacy; publicly critiquing established evidence and sowing doubt about its validity, often through the use of front groups; and, using corporate social responsibility programmes as marketing campaigns (e.g. to shift the focus from obesogenic diets onto the importance of active lifestyles by sponsoring sporting events). These practices have been increasingly identified in relation to nutrition science, with major implications for nutritional understanding.

CONCLUSIONS

In this paper, we have identified three main challenges to effectively tackling the obesity and NCD epidemics in an equitable and non-discriminatory way: evidence gaps, which can bias how health issues are viewed and valued; the framing of the nutrition issue as a matter of single nutrients and/or individual choices, rather than of diet and food environments; and the influence of the food industry in shaping the conversation, including which data are gathered and how issues are framed.

How research is structured and financed, how problems are framed and research priorities are set and how data

are gathered and to whom they are accessible has a major effect on our understanding of the health impacts of food systems and how we should tackle them. In recent years, the commitment of governments to fund research as a public good, or even to make data and research results available as a public good, has been increasingly compromised (New 2017). Many governments have reduced their support to all types of researchers, international research organizations and even public national surveys. Public-sector funding cuts have generated a void that is increasingly being filled by private interests. This creates several problems, as some issues of high public interest may not attract funding from private investors. These trends have implications for the validity of the research that does emerge.

The challenge is not simply to curb the production of research and data by private actors. The interaction between researchers and industry funding is highly complex, as in many instances, particularly given public funding shortfalls, researchers are required to drum up private funding and voluntarily approach industry members in search of grants. While private funding can and often has produced good research and evidence, such situations require, at a minimum, a careful analysis of potential conflicts of interest.

Nor does public research always marry with the public interest. In a context of increasing privatization, public-sector research has tended to echo the emphasis of private research agendas. Research priorities, structures and capacities, therefore, need to be fundamentally realigned with the principles of public interest and public good. These principles, in turn, may need to be redefined through democratic processes and brought into line with the nature of the health effects of food systems. The challenge, therefore, cannot be addressed within the scientific domain alone and will require new ways of addressing food-system risks at the interface of science, policy and public debate.

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Food Environments

Using agroecology to enhance dietary diversity

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Changes in farming and land-use practices over the last 60 years have resulted in a significant decline in overall agrobiodiversity. This decline in domesticated crop and livestock breeds, as well as edible wild plant and animal species, is occurring at an incredible rate.

According to the Food and Agricultural Organization of the United Nations (FAO 2004), 75% of plant genetic diversity has been lost as farmers worldwide have abandoned their various locally adapted crop varieties for the genetically uniform, high-yielding varieties promoted by industrial agriculture. Of the 250,000-300,000 known edible plant species, humans use only 150-200. Six local livestock breeds are lost each month to industrial production practices.

A mere 30 crops supply 95% of the calories we obtain from food, while only four crops – maize, rice, wheat and potatoes – supply over 60%. Today, 75% of the world's food is derived from a mere 12 plants and five animal species. Moreover, the astonishing diversity of food products available in supermarkets and local shops is actually based on a handful of staple crops and livestock. The food industry constantly re-engineers and recombines them into a variety of highly

processed products. Ingredients such as fructose corn syrup, refined flour, sugar, soy, and palm oil appear over and over again in ultra-processed foods that give the illusion of dietary diversity in the global food system (High Level Panel of Experts on Food Security and Nutrition (HLPE) 2017).

Around the world, there is a major shift in dietary patterns underway towards uniformity. Often termed the 'global dietary transition', this phenomenon is historically unprecedented and is occurring fastest in the urban areas of developing countries, albeit at different rates in different regions and socioeconomic groups (Hawkes et al 2017). About 3 billion people currently have low-quality diets based on a small number of plant and animal species. Their increasingly uniform diets either lack sufficient calories, minerals and vitamins, or contain too many energy-dense, nutrient-poor foods that are high in fat, salt and sugar. And this issue is not simply a problem of poverty: all strata of society are affected, be it low, medium or high income (HLPE 2017). The loss of agrobiodiversity has far-reaching effects on dietary diversity. Dietary diversity reflects household access to a variety of foods and the nutrient adequacy of the diet of individuals (FAO and the EU 2013). It is a key element of a healthy, high-quality diet, providing the spectrum of macro- and micro-nutrients essential for human health (Tontisirin et al 2002), in addition to other key elements, such as access to sufficient quantities of food and clean water, a healthy environment and care.

The current unparalleled reduction in dietary richness is having a significant impact on human health worldwide. For example, the decline in dietary diversity has changed the richness of human gut microbiota, the community of microorganisms living in the gastrointestinal tract. Healthy individuals have highly diverse gut microbiota and many of the common pathologies of the 21st century – obesity, inflammatory bowel disease and type 2 diabetes, for instance – are associated with reduced microbiotic richness (Heiman and Greenway 2016). Food and farming practices that increase dietary diversity can, therefore, improve human health by encouraging species-rich gastrointestinal microbiomes.

Research published in past editions of *UNSCN News* has emphasised that “increasing agricultural biodiversity in landscapes, food systems and diets is an important part of the solution to creating healthier diets from sustainable food systems” (Kennedy et al 2017, p.24). This paper focuses on the contributions that agroecology can make to dietary diversity and high-quality human diets by promoting more biodiverse, equitable and sustainable food systems.

After briefly defining agroecology and sustainable diets, the paper highlights specific examples of agroecological practices that increase the availability of and access to dietary diversity by enhancing biodiversity and ecosystem functions, promoting soil conservation, protecting watersheds, limiting the use of agrochemicals, re-localising the production, distribution and consumption of food within specific territories, and enabling fair access to dietary diversity and inclusion in food systems.

AGROECOLOGY: FROM UNIFORMITY TO FOOD-SYSTEM DIVERSITY

The central idea of agroecology is that agroecosystems should mimic the biodiversity levels and functioning of natural ecosystems. Such agricultural mimics, like their natural models, can be productive, nutrient conserving, pest resistant and relatively resilient to stresses such as climate change. Because of the portfolio effect of biodiverse agricultural production, they also mitigate the impact on farmers' incomes of market price volatility.

Sustainability and productivity are achieved through agroecosystem designs that enhance functional diversity at the genetic, species, ecosystem and landscape levels. Agroecological methods include genetic mixtures, crop rotations, intercropping, polycultures, mulching, terracing,

the management of diverse micro-environments for nutrient concentration and water harvesting, agro-pastoral systems and agroforestry (Gliessman 1990). There is an emphasis on re-use, creating closed-loop systems. For example, in the mulberry grove-fishpond system of China's Pearl River Delta, the leaves of the white mulberry tree are fed to silkworms, which produce silk. Compost from the mulberry tree and silkworm excrement are used to feed the fish, then the excrement of the fish and other organic matter from the pond mud is used as fertiliser for the trees (Zhong 1982).

The design of biodiversity-rich, energy-efficient, resource-conserving and resilient farming systems is based on mutually reinforcing agroecological principles. These modern principles of agroecology have their roots in the collective knowledge, practices and ecological rationale of indigenous and peasant agriculture(s) around the world (Hernández 1977; Altieri 1987). A core principle of agroecological practices is to value and respectfully build on peoples' knowledge and farmer-led experimentation to develop locally appropriate farming practices and agroecological solutions.

From the 1990s, agroecology as a scientific discipline moved beyond the field or farm scale to a greater focus on the ecology of whole food systems, including food production, distribution, consumption, waste management and governance (Francis et al 2003). This broader perspective has encouraged closer links with farmer organisations, consumer-citizen groups and social movements supporting alternatives to industrial food systems.

For social movements and farmer organisations around the globe, agroecology has become explicitly linked to food sovereignty and the Right to Food (Society for International Development 2015). These social movements do not see agroecology as simply a technique to produce food, but as a way to strengthen social organisations, build local knowledge and strengthen the food sovereignty of communities (Anderson et al 2015). Local farmer organisations and their networks play a central role in facilitating collective action for the scaling out and horizontal spread of agroecological knowledge and innovations (Pimbert 2018).

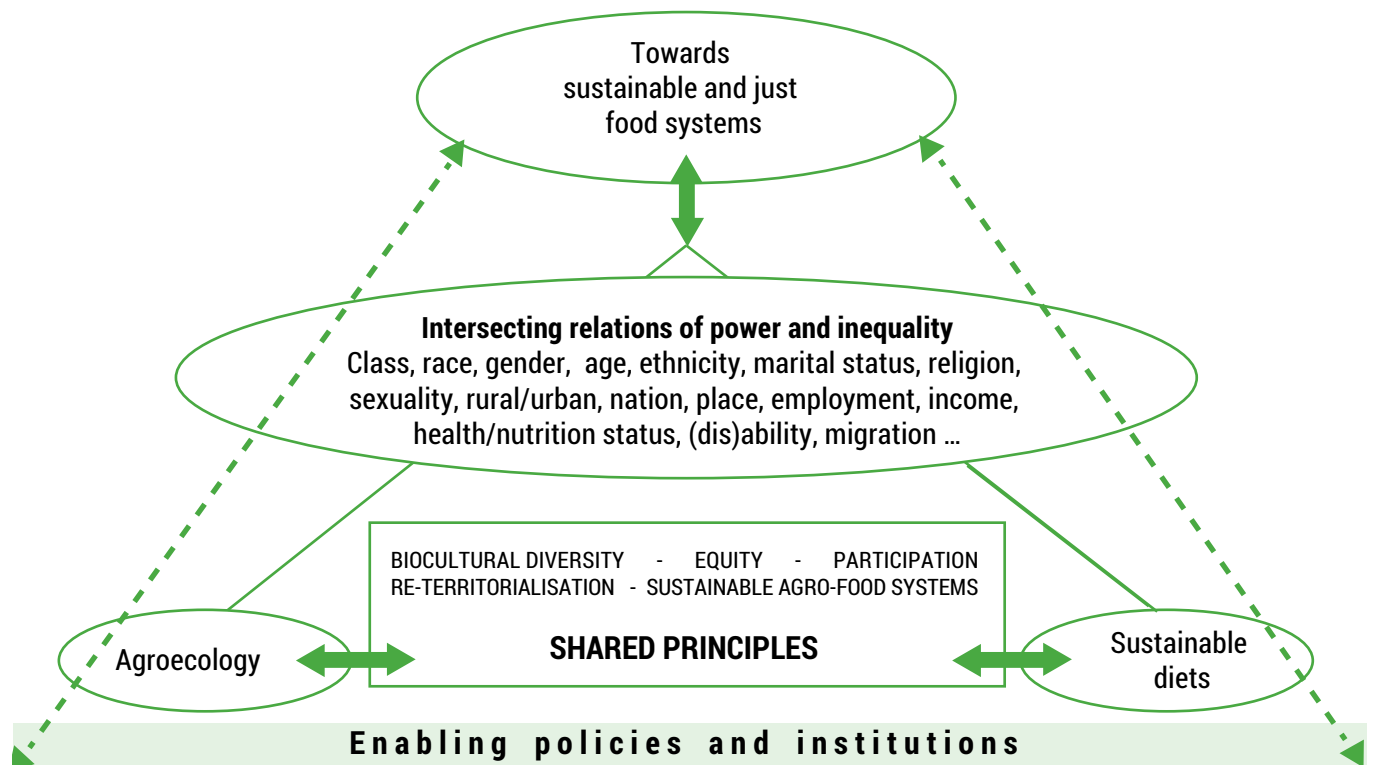
In sharp contrast to the drive for increasing uniformity in industrial food and farming (IPES-Food 2016), agroecology thus seeks to regenerate social, economic and ecological diversity throughout food systems and the landscapes in which they are embedded. By enhancing genetic, species and ecosystem diversity on farms and the wider landscapes, agroecological designs also increase the availability, quality and access to dietary diversity in food chains.

As such, agroecology contributes to sustainable diets – defined as “diets with low environmental impacts which contribute to food and nutrition security and to healthy life for present and future generations [and which 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” (Burlingame 2012, p.7).¹ Agroecology and sustainable diets are increasingly recognised in scientific, policy and civil-society arenas as pillars of sustainable food-system development (UNHRC 2010; UNHRC 2011).

¹ This definition is based on a concept developed in the 1980s by Gussow and Clancy (1986), realising that the health of humans and the health of ecosystems are inextricably linked. Similarly, the need to integrate nutrition and agriculture had been emphasised already in the late 1970s/early 1980s (Longhurst 2013). Longhurst, in his historical analysis, provides insights into the underlying reasons why the nutrition-in-agriculture agenda was neglected and the role the UNSCN played in supporting the integration of nutrition and agriculture. Only much later, from 2010, did this approach re-emerge in the form of ‘nutrition-sensitive agriculture’ (see Lemke and Bellows 2016).

As illustrated in Figure 1, agroecology and sustainable diets offer complementary frameworks, supporting biocultural diversity and equity, and sharing the intersecting principles of re-territorialisation of sustainable agro-food systems, and the participation of diverse actors. To achieve participation and greater equity, it is important to pay attention to the intersecting balances of power and inequality between food-system actors. At the household level, this refers to access to resources and the decision-making power of household members, which are determined by gender, age, marital status and health, among other things. At the regional and community levels, farmers’ access to markets, credit, agricultural extension and other services are determined by factors including gender, class, race, ethnicity, wealth and place. At the national and global levels, this refers, for example, to the impact of trade relations on a country’s agricultural sector and farmers and to the concentration of power in the agribusiness sector. Enabling policies and institutions to support agroecology and sustainable diets is the foundation to which to develop sustainable and just food systems, in dialogue with the various food-system actors concerned.

Figure 1. AGROECOLOGY AND SUSTAINABLE DIETS AS COMPLEMENTARY AND INTERSECTING CONCEPTS



AGROECOLOGY ENHANCES DIETARY DIVERSITY

Agroecology offers important ways in which to enhance dietary diversity in both temperate and tropical agriculture. Examples of specific diversity-generating agroecological practices for different parts of the food system – from field to plate – are highlighted below.

1. Diversifying species, crop varieties and livestock breeds in the agroecosystem – including integrating crops, trees and livestock at the field and wider landscape levels

Agroecological innovations in farmer-led evolutionary plant breeding (EPB) are re-generating a plethora of crop varieties that are uniquely adapted to diverse local environments. In evolutionary plant breeding, a genetically diverse crop population is left to cross freely, allowing natural selection to generate many varieties adapted to different soils, cold and dry conditions, pests and farm micro-environments.

For example, in Iran, farmers working with scientists have planted and mixed 1,600 different varieties of F1 barley lines in the same field and the evolutionary populations continue to spread throughout the country today (Rahmanian et al 2014). The ensuing diversification of the original plant populations through evolutionary selection processes increases the quality and dietary diversity of foods produced. A protein analysis of the Iranian barley varieties, which are mostly used as an animal feed in Iran, showed that the evolutionary population had more protein in them than the local improved variety (Rahmanian et al 2014).

Similarly, farmers growing evolutionary populations of wheat in Iran, France and Italy make a diversity of high-quality breads from the evolutionary populations. Some farmers even market this bread in local artisanal bakeries. The farmers confirmed that creating genetic mixtures not only brings greater yield stability and local adaptations to a multitude of environments, but it also contributes to dietary diversity by producing greater aroma and higher quality when making bread (Demeulenaere et al 2011; Dessimoulie 2017).

In Algeria, Chad and Egypt, farmers encourage high intra-specific genetic variation in their date-palm oasis agroecosystems (Barakat 1995). The principal varieties differ from one oasis to another. In general, there are more than ten varieties of date palm in each oasis. In a well organised and maintained palm grove, the owner plants different varieties of dry and semi-dry dates that mature in different months to meet the

demands of local consumption and the market. Moreover, each tree variety confers its own unique stamp on the taste of the fruit and the wine made from it, thereby enhancing dietary diversity.

Agroecology also works to diversify ecosystems and landscapes. In the home gardens that cover 15% of the land in Sri Lanka, family farmers grow trees, shrubs, herbs, crops and animals as a complex multi-layered agroecological system. The garden system is like the complex structure and multiple functions of the forest, though not identical to it. Potential dietary diversity is available in the form of many species of fruit, vegetable, spice and medicine, staple food items, fodder, fishery products, livestock products, poultry products and bee honey. Research shows that home gardens enhance dietary diversity and food security by (a) providing direct access to a variety of nutritionally rich foods, (b) increasing purchasing power from savings on food costs and income from the sale of garden produce and (c) providing fall-back foods during periods of temporary food scarcity (Pushpakumara et al 2012).

2. Strengthening the 'immune system' of agricultural systems through the enhancement of functional biodiversity by creating appropriate habitats for the natural enemies of pests, allelopathy and antagonists and through adaptive management

Many methods of pest control in agroecology rely on biodiversity to eliminate or reduce the use of toxic insecticides, herbicides and fungicides. Genetic mixtures deployed in temperate and tropical agroecosystems can be effective in containing disease in small grain crops (Wolfe 1985), as well as insect outbreaks, for instance, in corn (Power 1988) and potatoes (Cantelo and Stanford 1984). There are also many documented experiences showing that insect pests tend to be less abundant and damaging in agroecosystems with higher plant diversity, for example, intercrops, polycultures, crop rotations, cover crops, mixed tree stands and mixtures of annual and perennial plants (Altieri 1994).

In Italy, free-ranging chickens in olive orchards effectively reduce weed infestation and help control pests such as olive fly and weevils (Paolotti et al 2016). Shropshire sheep not only control weeds in commercial apple and pear orchards in northern Europe, they also help limit the spread of fungal diseases by eating fallen leaves (Geddes and Kohl 2018). By relying on an appropriate mix of plant and animal species (functional biodiversity), these agroecological practices help reduce pest and disease outbreaks, while simultaneously enhancing the dietary diversity offered by the agroecosystem.

3. Enhancing beneficial biological interactions and synergies throughout the system and among the components of agro-biodiversity, thereby promoting key ecological processes for sustainable production and resilience to stresses and shocks.

There are more than 100,000 known pollinators (bees, butterflies, beetles, birds, flies and bats). About 90% of all plant species are pollinated by animals and about 75% of the world's agricultural crops depend on pollination provided by insects and other animals (IPBES 2016). The use of synthetic pesticides and other management practices that reduce the species or abundance of pollinators can result in less genetic variation in crops dependent on pollinator visits for reproduction, both in temperate and tropical climates. With a loss of pollinators, seed production declines and the vulnerability to pests and climatic change increases, with a resulting loss of genetic diversity.

Agroecological practices help increase the profusion of pollinators by maintaining or creating greater diversity of pollinator habitats and flowering plants in agricultural and urban landscapes, as well as supporting the local adaptive management of habitat patchiness at different scales. Moreover, by removing the need to use pesticides and relying instead on natural pest-control practices based on the functional diversification of farms (genetic, species and ecosystem diversity), agroecology helps conserve pollinator species that are vital for the sustainable production of food-crop species and their long-term resilience to shocks and stresses (IPBES 2016). In turn, this enhances the availability and continued supply of dietary diversity, both now and into the future.

Not using toxic agro-chemicals and relying instead on agroecological methods for pest control also allows significant numbers of diverse wild foods to survive in the farm landscape. This potentially increases dietary

diversity and community resilience to seasonal food shortages and climate change. Historically, in South East Asia, a large proportion of all foods consumed have been wild foods from paddy fields, including fish, snakes, insects, mushrooms, fruit and vegetables. Wild foods found in rice paddy accounted for about 50% of all foods consumed in North-East Thailand in the 1980s (Somnasang et al 1988).

However, the intensive use of pesticides in Green Revolution rice farming significantly reduced the abundance and quality of these wild foods. This trend has been reversed in parts of South-East Asia, where horizontal networks of farmer field schools have learned to use agroecological principles to control weeds, insect pests and diseases in rice paddy fields (Pontius 2002). For example, in Indonesia, pesticide-free agroecological innovations have helped bring back these diverse wild foods in and around paddy fields, thereby increasing available dietary diversity for local communities (Fakih et al 2003).

4. Creating favourable soil conditions for plant growth and recycling nutrients, particularly by managing organic matter and enhancing soil biological activity

By closing nutrient loops through recycling, using cover crops, composting copious amounts of organic matter, minimum tillage and crop rotations, and by building soil fertility and its organic matter content (Kittredge 2015), agroecological practices can arrest and reverse the deterioration in the micronutrient quality of our food intake. This is important, because several studies comparing the changing mineral content of vegetables, fruit, meat and some milk and cheese products in industrial farming since the 1940s (Davis et al 2004; Mayer 1997; Thomas 2003) show that there has been a significant loss of minerals and trace elements in these foods over the last 70 years. In the UK, for instance, there was a dramatic reduction in the copper present in vegetables between 1940 and 1991 (76%) and zinc between 1978 and 1991 (59%). The iron content of milk has dropped by more than 60% and by more than 50% in cream and eight varieties of cheese between 1940 and 2002 (Thomas 2003).

Agroecological practices are regenerative of the intrinsic dietary quality of diverse plant and animal foods because they address the main causes of soil demineralisation: the excessive use of NPK (nitrogen, phosphorous and potassium) fertilisers, the trace mineral depletion of the soil itself, the adoption of more genetically uniform crop varieties and the loss of micro-flora/fauna within the soil (Ward et al

2001; Thomas 2003; Hodges and Scofield 2012). Similarly, organically manured soils and their diverse micro-flora/fauna help improve the quality and biochemical diversity of diets by enhancing the concentration of many health-conferring molecules in plants and livestock animals, such as secondary plant metabolites, polyphenols and other anti-oxidants (Benbrook 2005; Hodges and Scofield 2012). Compared with conventionally grown foods, agroecological and organic plant-based foods may contain 20-40% more antioxidants, for example (Baranski et al 2014).

5. Enhancing the conservation and regeneration of soil, water and agro-biodiversity on the farm and neighbouring landscape, as well as the watershed

Farmers' agroecological practices can enhance available dietary diversity by creating micro-environments and more structural diversity on farms and the wider landscape. By building terraces, swales, tree belts, hedges and ponds to conserve soil and water, farmers' individual and collective action generate ecological complexity and heterogeneity at different scales. In turn, this creates habitats and micro-environments for wild edible species to co-exist in agroecosystems and human-managed landscapes.

This is important because different types of agricultural biodiversity ('cultivated', 'reared' or 'wild') are used by different people at different times in different places, and so contribute to livelihood strategies in a complex fashion. For example, wild resources are particularly important to the food and livelihood security of indigenous peoples (Kuhnlein et al 2009), as well as the rural poor, women and children, especially in times of stress, such as drought, changing land and water availability or ecological change (Guijit et al 1995; Scoones et al 1992). These groups generally have less access to land, labour and capital and thus need to rely more on the wild diversity available.

The mean use of wild foods by agricultural and forager communities in 22 countries of Asia and Africa (36 studies) is 90–100 species per location. In countries such as Ethiopia, India and Kenya, aggregate country estimates can reach 300–800 species (Bharucha and Pretty 2010; Guijit et al 1995). In Zimbabwe, some poor households rely on wild fruit species as an alternative to cultivated grain for a quarter of all dry-season meals (Wilson 1990). In India, women Dalit farmers in the Medak district of Telengana include more than 40 species of highly nutritious wild greens in their diets in different seasons (Salomeyesudas

and Satheesh 2009). The food list of these dryland farmers includes an impressive 329 species or varieties of cereals, millets, pulses, oil seeds, fruit, vegetables, wild greens, roots and tubers. Roots, leaves, flowers, fruits, gums and bark are consumed seasonally. Knowledgeable non-literate women farmers harvest these highly nutritious wild foods from environments they have co-created with nature: collectively managed watersheds, common lands, tree plantations and woodlands, field edges and organically manured farm plots (Salomeyesudas and Satheesh 2009). Women depend on access to this land to gather diverse foods and collect firewood or building materials for alternative and supplementary livelihood activities (Doss et al 2014). In Malawi, the food insecurities of women and their families have worsened as women have lost access to land through land deals (Bezner Kerr 2005). Tsikata and Yaro (2013) show for Northern Ghana that women were not compensated for the loss of access to land they had used for farming, fuel wood, shea and other trees, with severe impacts on households, including dietary diversity, and the local economy.

6. Agroecological markets for dietary diversity

More transformative agroecological paths to sustainable living build alternative food networks that re-localise production and consumption. This approach seeks to reinforce connections between producers and consumers and integrate agroecological practices with alternative market relationships within specific territories (Gliessman 2014; CSM 2016). For example, policies for the procurement of locally produced agroecological/organic foods have promoted access to more dietary diversity in schools, hospitals and public canteens in Italy, Austria, Denmark and Brazil (Foodlinks 2015; Sonnino 2009; Swensson 2015). Supportive municipal policies for sustainable territorial development based on agroecology and re-localised food systems in the bio-districts of Italy, Spain, France, Morocco and Senegal have boosted household access to dietary diversity (International Network of Eco-Regions 2016). Throughout Europe, as is the case in other parts of the world (for example, Japan, the US and Canada), rising numbers of short food webs and alternative food networks, such as Community Supported Agriculture (CSA), bring agroecological producers and food eaters into closer contact, provide income-generating markets for producers and increase consumers' access to dietary diversity (Kneafsey et al 2013; European Community Supported Agriculture (CSA) Research Group 2016).

Similarly, a network of barter markets run by women farmers in the Andean region of Peru ensures that indigenous households (and women, in particular) have access to the broad range of crops and wild foods that grow at different altitudes: from the citrus and other vitamin-rich fruits of the lower Amazon forest to the many crops growing on the Andean mountainside – such as maize, quinoa, beans, wild greens, potatoes and hardy root crops that grow above 3,700 metres (Argumedo and Pimbert 2010). Re-territorialised markets for agroecological production combined with economic exchange based on solidarity, reciprocity, gift relations and citizen oversight ensure that access to dietary diversity is more inclusive and socially just (Pimbert 2015).

CONCLUSION

By reorganising the material basis of the food system in the image of nature, the agroecological practices highlighted in this paper are generative of dietary diversity. However, although agroecology can increase the availability and quality of and access to dietary diversity for healthy nutrition, it should not be seen as a 'technical fix' by policymakers. Diversity on the farm does not automatically lead to diversity on the plate. More than agroecology, alone, is required to ensure fair access to dietary diversity in society. Gender-equitable rights of access and use of land, trees and their products, water and seeds, as well as socially inclusive forms of economic exchange, are all needed in addition to shifts in the balance of power and entitlements to realise the right to food and nutrition for all (Bellows et al 2016).

Women's position in societies is crucial to enhanced dietary diversity, nutritional status and the wellbeing of all. Households have better food security and dietary diversity if women can take decisions on the distribution of household resources and the nutrition of household members (Lemke et al 2003; Doss 2013; Bezner Kerr et al 2013). Furthermore, women grow more food for household consumption than men (Vargas Hill and Vigneri 2014).

However, globally, women continue to have less access to a variety of resources, health services and care, and decision-making (Quisumbing et al 2014), and they are still largely responsible for the gender-determined labour- and time-intensive chores of collecting water, fuel, cooking, taking care of children and sick people, and taking on additional agricultural tasks, with men migrating for work (FAO 2016). Desired dietary diversity for good nutrition and development outcomes can only be achieved if these structural inequalities and gender-based violence are addressed as part of broader societal changes.

In addition to more funding and policy support for agroecology (IPES-Food 2016; FAO 2018; Pimbert and Moeller 2018), deep structural changes in wider society are needed if equity and non-discrimination are to drive dietary diversity for good nutrition. Coordinated citizen action is needed to overcome the concentration of power and privilege that locks food systems into pathways that are ever more harmful for people and planet (IPES-Food 2016; Pimbert 2009). In turn, this transformation calls for a clear commitment to a politics of democracy and inclusion, gender justice and freedom.

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Overweight, obesity and the food environment: Are there solutions?

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The United Nations Decade of Action on Nutrition¹ is focused on alleviating malnutrition in all its forms – undernutrition, micronutrient deficiencies, overweight and obesity. Historically, actions to alleviate malnutrition have been directed towards the ‘undernutrition’ end of the continuum and, indeed, successful, efficacious interventions have been identified (Black et al 2008; Black et al 2013).

Overweight and obesity have existed throughout the ages; it is the current magnitude of overweight and obesity, however, that is alarming with 1.9 billion adults classified as overweight and obese (WHO 2017). As noted in *Ever Seen a Fat Fox? Human Obesity Explored*, man is the only animal with rampant levels of obesity and its concomitant non-communicable diseases (NCDs) (Gibney 2016). Solutions to prevent and treat overweight and obesity present a newer set of challenges when it comes to the appropriate identification and design of policies and programmes.

The 2030 Agenda for Sustainable Development² has focused attention on the eradication of malnutrition, including overweight and obesity. The challenge involves identifying effective strategies using a rights-based framework as the basis of change. FAO notes that the Right to Food is realized when every man, woman and child, alone or with a community of others, has the physical and economic access to adequate food or means for its procurement. The rights-based approach emphasizes the right to feed oneself with dignity and the right to adequate food. To date, governments and policy officials have been unable to identify an evidence-based approach to curb rates of obesity that chimes with a rights-based perspective within existing food systems.

The purpose of this paper is to assess the potential of elements of existing food systems and food environments to enhance diet and nutritional effects and, in turn, be part of the solution to the obesity pandemic, using a rights-based approach.

OBESITY AND FOOD SYSTEMS

A recent wake-up call in *The Lancet* underlined that it is imperative that we move beyond an emphasis on individual behaviours and assess solutions to overweight and obesity in a broader context (*The Lancet Public Health* 2018). There are multiple levels that must be considered in reversing the obesity epidemic, including community, industry/markets, government and global (Mozaffarian 2016). This paper will focus on changes at the government level and how actions in this domain interact with food systems to effect positive or negative changes in obesity.

Food systems are defined as all the elements and activities that relate to the production, processing, distribution, preparation and consumption of food (HLPE 2017). A number of typologies have been developed to describe food systems – ranging from the traditional, rural to the modern, industrialized. Each system is associated with differential effects on nutrition. In the traditional, rural system, there are high rates of stunting, underweight and micronutrient deficiencies, yet low rates of overweight, obesity and NCDs (IFPRI 2015). Modern systems, in contrast, are associated with lower rates of undernutrition and micronutrient deficiencies concurrent with high levels of overweight and obesity. There are strong suggestions that the dramatic increases in obesity in almost all countries have been driven in part by changes in the food systems (Gibney 2016).

1 http://www.who.int/nutrition/decade-of-action/information_flyer/en/.

2 <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>.

FOOD ENVIRONMENTS, NUTRITION AND OBESITY

The food environment is defined as “the physical, economic, political, and socio-cultural context in which consumers engage with the food system to their decisions about acquiring, preparing and consuming food” (HLPE 2017, p.28). It is within the food environment that consumer food choices are made. Food environments can have positive or negative effects on diet quality and, in the longer term, nutritional status. The nutrition-enhancing impacts of food environments at the community level are influenced by three key factors: geographical access (proximity), income access (affordability) and information access.

Geographical access

Where we eat, what we eat, who we eat with, why we eat, and when we eat are all critical factors influencing diets and nutrition (Hartman 2012). Urbanization has changed the food environment and resulted in food deserts (defined as a dearth of vendors selling healthy foods) and food swamps (defined as plentiful cheap food of low nutritional quality). Both food deserts and food swamps have been theorized as two major, negative aspects of food environments that promote low-quality diets and, in the longer term, overweight and obesity (HLPE 2017). A rights-based approach stresses the quality of foods as well as the dignity with which they can be obtained. In the case of food deserts and food swamps, a person’s right to food is compromised by the limitations on their ability to procure a healthy diet.

To date, much of the literature on food environments and obesity has been conceptual. In addition, the existing reviews of effects of the food environments on overweight are limited; they have been conducted mainly in the US and focused almost exclusively on where people eat. The results are mixed. (Cobb et al 2015) summarized 71 studies and reported that, in a majority of them, fast-food outlets had a null effect on obesity. Fraser et al (2010) summarized 33 studies and reported that the availability of fast-food restaurants was associated with lower consumption of fruit and vegetables. Williams et al (2013) evaluated the influence of food environments near schools on food consumption and/or food purchases. The only notable result was a slight positive effect of presence of fast-food outlets on body weight. Clearly, these three studies are illustrative of challenges in understanding the drivers of obesity.

These reviews do not suggest that fast-food outlets are to be encouraged, but rather that the causes of overweight are complex and not captured by just one aspect of the food environment. Indeed, at the individual level, it is misleading to assess the effects of the food environment on overweight without simultaneously evaluating the impacts of the built environment on physical activity. This is beyond the focus of this paper.

Income access and affordability

Food prices and household income are two of the main factors affecting people’s ability to purchase a nutritionally adequate diet. Higher-income households in the United States are more likely to consume a nutritionally adequate diet (Drewnowski and Specter 2004). Thus, historically, governments have pursued policies to either increase household food-purchasing power or decrease the price of foods. Indeed, many government-sponsored interventions such as supplementary feeding programs were developed to enhance access to quality diets.

Interventions have ranged from those emphasizing calories or quantity of food such as the food-subsidy programmes in Egypt, food-distribution schemes, such as ration shops in India, food-for-work programmes and cash-transfer programmes, either in kind or direct. A review by the Food and Agriculture Organization of the United Nations (FAO) in 2017 reported that participation in a cash-transfer programme led to an increase in food expenditure of 10-30% in Zambia, Zimbabwe, Kenya, and Malawi (FAO 2017). Part of this transfer was spent on significantly larger amounts of animal-based foods, particularly meat and dairy, contributing to increased dietary diversity among beneficiaries.

The overwhelming commonality of these diverse programmes is the emphasis on improved diets – often on increased caloric consumption – as a way of alleviating undernutrition. As discussed, however, the nutritional landscape has changed and these same approaches are being re-evaluated in light of burgeoning obesity rates. Evaluations of the effects of nutrition safety-net programme on overweight are limited, as the original goals of most programmes were focused on tackling undernutrition.

One of the oldest food-subsidy programmes is in Egypt. The subsidy programme was designed to protect food security, including shocks caused by escalating food prices, for the most vulnerable households. The subsidy scheme has been a major part of Egypt's social safety net and has been successful in achieving its original goals. Caloric availability per capita in Egypt is the highest in the region (3,658 calories) and increases from 3,033 in the lowest-income to 4,420 in the highest-income households. The rate of overweight, in both adults and children, has soared, however. While it is not possible to unequivocally link the food-subsidy programme to obesity, the government is exploring current modifications to the scheme to enhance the diet quality and nutrition effects on participants. From a rights-based perspective, the Egyptian scheme does not stigmatize low-income households; the broad-based subsidy is countrywide and, therefore, not seen as charity, but as a means of improving food intake, both in terms of quantity and quality.

Another example of interventions to improve the affordability of foods are the nutrition safety-net schemes in the US. The backbone of the country's nutrition safety net comprises two main programmes: the Supplemental Nutrition Assistance Program (SNAP) (formerly called Food Stamps) and the Special Supplemental Food Program for Women, Infants and Children (WIC). These two plans were designed to alleviate the underlying causes of poor nutritional status.

SNAP increases food-purchasing power for low-income households. WIC is a food-supplementation programme for pregnant and lactating women, infants and children up to their fifth birthday. A body of research documents suggests that the two programmes have achieved their initial objectives (Kennedy and Guthrie 2016), so their focus has now broadened to include the goal of preventing or decreasing rates of overweight in the target population. A critical question for the US nutrition assistance programmes is the degree to which, as implemented, SNAP and WIC are contributing to the rise in obesity. The most plausible explanation of any possible link between SNAP and/or WIC and obesity is the programmes' effect on diet, specifically food-energy intake.

The earliest studies on the SNAP-obesity link produced mixed results (Kennedy and Guthrie 2016). More recently, an expert panel concluded that there was insufficient evidence that participation in SNAP increased the risk of becoming obese (Kennedy and Guthrie 2016). This conclusion was backed up by a methodologically more rigorous study, which reported that SNAP was not associated with increased rates of obesity in children (Kennedy and Guthrie 2016). More

intriguing was the finding that SNAP, by improving birth weights in participant households, may confer longer-term benefits, including a reduction in rates of obesity (Kennedy and Guthrie 2016). In addition, research suggests that there is a marked reduction in obesity in individuals participating in SNAP early in life (Kennedy and Guthrie 2016).

The WIC programme provides supplemental foods to participants, emphasizing not simply calories but nutrients known to be lacking in the diets of women and pre-schoolers. The last national evaluation of WIC reports that the programme increased intake of targeted nutrients in preschool-aged children, but did not increase caloric intake (Rush et al 1988). Thus, it is unlikely that the programme's food supplementation exacerbated overweight.

Supplementary feeding programs are also common in Latin America. Chile's successful supplementary feeding programme for pre-schoolers has been associated with a significant decline in malnutrition in that age group (Uauy et al 2001). The programme, however, has been tied to significant increases in overweight in participating children. The authors conclude that the nutrition intervention, particularly in stunted children, has the potential to aggravate the obesity epidemic.

These three examples from Egypt, the US and Chile, present some commonality of results. The programmes (as originally designed and implemented) have resulted in significant decreases in undernutrition and/or improved food security. A key issue now is whether and how the programmes can be modified to be part of the solution to the obesity epidemic, or whether they are an instigator of it.

Information access

Encouraging healthier food choices through a variety of approaches is a component of many nutrition programmes. And while research suggests that improving access to food outlets can improve food purchases, data suggest that the majority of variations in household diet quality are related more to income and education (Darmon and Drewnowski 2008).

Giving consumers access to information is a potential way of influencing behaviour and shaping decisions (Turner et al 2017). However, evidence suggests that information and education, alone, may not trigger significant changes and evidence on the effectiveness of nutrition education interventions remains thin (Dollahite et al 2016). However, there are many tools available that can be used to influence consumer knowledge, including mass-media campaigns, social and behavioural change communication (Pelto et al 2016), food-based dietary guidelines (FBDGs) and food labelling. This paper will focus on two such tools: FBDGs and labelling.

FBDGs have been developed in the expectation that they will help to improve the effectiveness of nutrition education efforts, both at the national level and among the general public. However, Smitasiri and Uauy (2007) conclude that while their development has contributed to the understanding of the role of nutrients and foods in achieving optimal health, the impact of these guidelines on human health has been limited. Currently, there are very few FBDGs in low-income (only in 2 out of 31) and lower middle-income countries (12 out of 51) (GloPan 2016). There is a real need to facilitate not only the development of FBDGs, but effective communication of their key messages. Comprehensive, modern and sustained communication activities are necessary (Smitsairi and Uauy 2007).

The labelling and declarations on food packaging, in food retail outlets and on restaurant menus can be effective tools in shaping consumer preferences. They can also influence the food and beverage industry by encouraging product reformulation (Campos et al 2011; Cairns et al 2013). Nutrition labelling has been commonplace in many countries for decades. It aims to provide consumers with information about the nutrients present in a given food. Although many countries have adopted back-of-the-pack (BOP) and front-of-the pack (FOP) information on energy and specific nutrients, there is limited evidence to indicate that these labels have influenced consumer comprehension and food-purchasing decisions (Mandle et al 2015).

These labels, depending on their design, require some degree of nutritional literacy and can be difficult to interpret. For this reason, there have been recent moves to adopt easy-to-interpret labels (e.g. traffic-light, star ratings, etc.) on FOP or on store shelves. It is thought that labels of this type are easier for consumers to interpret and may help them make better food choices. However, the evidence related to purchasing behaviour and intake associated with labels is both limited and mixed (Hersey et al 2013).

The Chilean government has put into law that food and drink products be labelled with a black stop sign if they contain high quantities of energy, saturated fat, sugar or sodium. Not only does the label warn citizens about products that should not be the basis of their diet, but those foods with black stop signs are restricted from being advertised on TV to children under the age of 14. Their sale, provision, promotion or marketing is prohibited in schools. This takes labelling one step further, in that it promotes programmatic action. Since the law's introduction, 93% of the population in Santiago recognizes the FOP nutritional warnings, while 92% of people have said that the warnings have influenced their purchasing decisions. Of these, 68% say they now choose fewer or no foods with warnings (Valdebenito et al 2017).

There is also preliminary evidence to indicate that Ecuador's FOP traffic-light labels have led to product reformulation by 20% of the country's large- and medium-sized food companies (ANDES 2016). However, not all countries have instituted FOP labels. For example, in India, the food sold is often of variable quality, while much of it is unbranded and not labelled at all (Downs et al 2014).

IMPROVING THE FOOD ENVIRONMENT TO PREVENT OBESITY

Different types of food system present a variety of challenges for obesity prevention. The traditional food system is rural, with close proximity to food sources, either through on-farm production, local or nearby markets, or village kiosks. At the opposite end of the spectrum, the modern, industrialized food system, typified in urban areas, is based on a variety of retailers, including supermarkets, bodegas and street vendors. Thus, the food environment will vary in different food systems.

There are, however, some overarching factors that are critical to ensuring healthful diets and nutritional status. First, the availability of nutritious foods must be ensured. In traditional food systems, strategies to increase proximity to healthy foods could include a combination of improved infrastructure – roads and transportation – and investment in local food processing. The modern food system might emphasize laws and tax incentives for supermarkets to be built in low-income areas, for farmers' markets, or for zoning laws to reduce the density of fast-food vendors, as well as incentives for food trucks to sell nutritious foods. In general, proximity to food is not the key constraint in urban systems, but rather the availability of quality foods.

Second, access to healthy foods is determined by price and spending power. Governments can provide incentives for retailers to stock nutritious foods, but government interventions can also be used to increase purchasing power, such as cash-transfer programmes and SNAP-type approaches. By issuing 'green' food stamps with a higher value, SNAP provides recipients with greater access to fruit and vegetables. A basic assumption in such public programmes that increase access to food is that improved diet quality is an essential component for obesity prevention.

Third, FBDGs and labels can provide information to help consumers make decisions on the quality and safety of their foods. In traditional food systems, there is a need to increase the promotion and knowledge of what is a healthy diet and what is not. Information is disseminated largely through public-health nutrition education, often through posters, signs in kiosks and on buildings, and on some billboards. Much more can be done, however, to establish FBDGs and labelling systems with set, standardized ingredients and nutrition information on packages and labels.

The control of quality and food-safety standards should be improved to increase the demand for quality ingredients at affordable prices. In modern food systems, branding and advertisements are common, but the marketing of unhealthy foods to children should be banned. FBDGs are available, but public access to or knowledge of their existence should be a priority. Often, it only takes a small nudge in the right direction (through, for example, the positioning and placement of food in stores, discounts on healthy foods, smaller serving sizes, etc.) for consumers to make healthier choices.

CONCLUSION

Newer paradigms are needed to tackle the obesity epidemic. A rights-based approach ensures that everyone has access to adequate food – both quantity and quality – with dignity. A range of government policies and programmes emphasizes a rights-based approach to nutrition interventions, primarily focused on alleviating food insecurity in vulnerable groups. Less apparent is how to apply a rights-based approach to existing policies and programmes to address the obesity problem. Even more problematic is generating the evidence needed to formulate new policies and programmes for obesity prevention.

Research provides solid evidence that addressing the obesity epidemic is complex: there is no 'silver bullet'. The variety of food environments globally provides an obvious starting point for maximizing efforts to eliminate malnutrition in all its forms. The evidence to date would suggest effective approaches will involve tackling the issues of geographical, financial and informational access simultaneously. Policies and programmes that can be scaled up are desperately needed to halt the exponential growth in obesity worldwide.

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Unpacking Common Misperceptions

Eating together: Commensality to end gender discrimination in household food distribution

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INTRODUCTION

India is home to almost a quarter of the world's hungry population (FAO 2017), with women the most vulnerable to the inter-generational cycle of undernutrition. The traditional patriarchal family structure breeds subtle forms of gender discrimination, even within the home. Women often eat last and least at every meal.

As a consequence, 53% of Indian women of reproductive age suffer from iron-deficiency anaemia, compared with only 23% of men (International Institute for Population Sciences (IIPS) and ICF 2017). Some 23% of Indian women are also too thin, with a low body mass index.¹ Children of

these undernourished mothers are also more likely to be malnourished. In 2015-16, 38% of Indian children below the age of five were stunted due to malnutrition – a decline of just 10 percentage points over the previous decade (IIPS and ICF 2017).

In their seminal research comparing nutrition in South Asia and sub-Saharan Africa two decades ago, Ramalingaswami, Jonsson and Rohde observed that, “in both regions, it is common for the men to eat the most and the best, leaving the women and children to eat the last and the least; in South Asia the mother will then feed her sons the best of what is left, at the expense of her own and her daughters' nutritional well-being” (Ramalingaswami et al 1997).

Our field research, however, shows this generalization to be somewhat erroneous. Women in India's South Asian neighbours do not necessarily eat last. This is perhaps one reason why Bangladesh and Nepal have lower levels of malnutrition, despite being poorer in terms of per capita income.

¹ Body mass index (BMI) is calculated by dividing weight in kilograms by height in meters squared (kg/sqm). Women considered to be too thin are those with a body mass index of less than 18.5 kg/sqm (IIPS and ICF 2017).

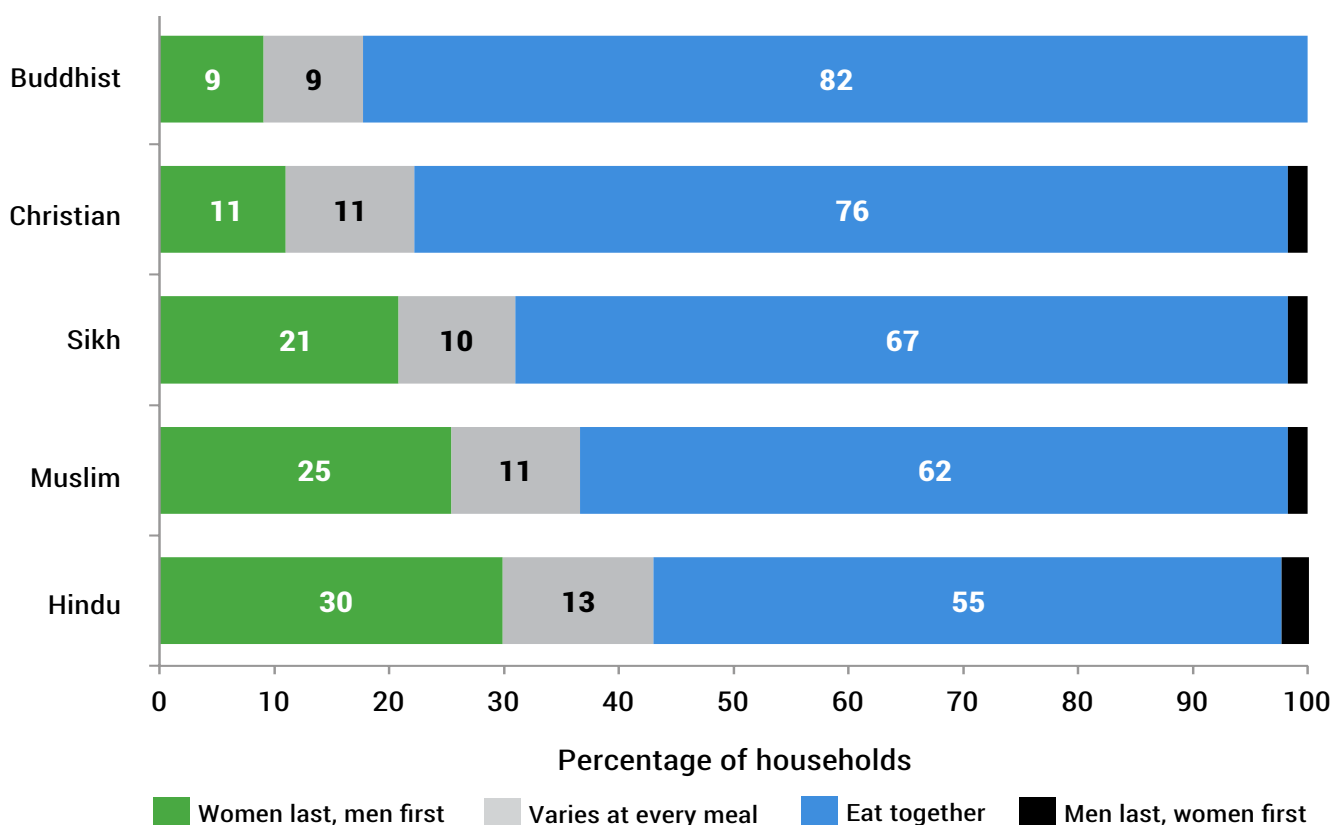
WHO EATS LAST?

In his Capability Approach, economist Amartya Sen posits that family living consists of “cooperative conflicts”, in which “women and men have both congruent and conflicting interests” (Sen 2000, p.192). This conceptual framework is particularly relevant to India, where even food in impoverished homes is often rationed based on gender. The Second India Human Development Survey (IHDS II) confirms that in more than half of the households in the poorest states of northern India (in contrast to the south), women eat last at every meal (Desai and Vanneman 2017). The 2015 Social Attitudes Research India (SARI) report also concludes that

women living in households where men eat first are more likely to be underweight (Coffey et al 2018). Even at the start of pregnancy, 42% of Indian women are underweight, with eating last only perpetuating the inter-generational transmission of undernutrition (Coffey 2015).

Furthermore, IHDS II also reveals an interesting trend based on religion. Men are less likely to eat first in Buddhist (9%), Christian (11%), Sikh (21%) and Muslim homes (25%) across India than in Hindu households, where men eat first 30% of the time (Figure 1). Among Hindus the practice is most acute among upper-caste Brahmins, where women eat last 36% of the time.

Figure 1. WHO EATS LAST?

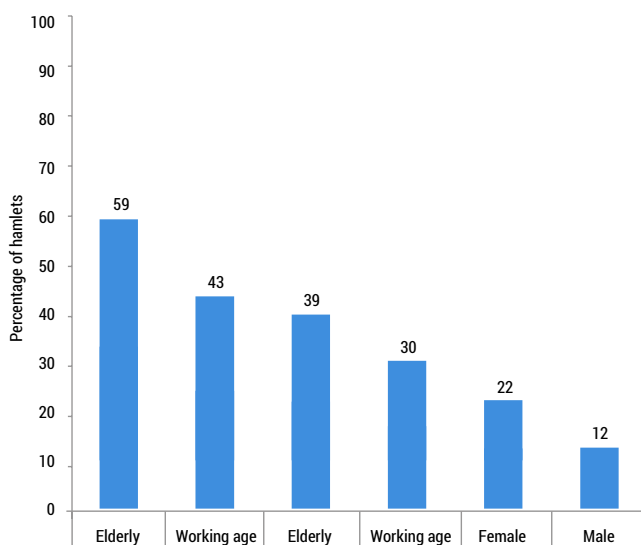


Source: Calculated from the India Human Development Survey II 2011-12 (Desai and Vanneman 2017).

Moreover, an insightful survey conducted in 2003, in the midst of the severe Maha Akal drought in the Indian state of Rajasthan, revealed that women of working age (generally considered to be 15-64 years) and beyond saw the largest drop in food consumption within the family (Sivakumar and

Kerbar 2004). This disproportionate allocation of food between men, women and children was compounded “by the traditional custom of women eating last after serving everyone in the family”.

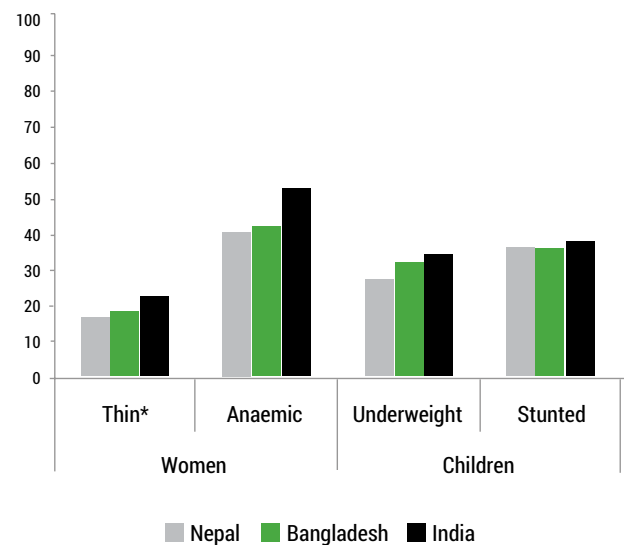
Figure 2. PERCENTAGE OF HAMLETS BY GROUP WITH LARGEST FALL IN FOOD CONSUMPTION DURING DROUGHT



Source: Sivakumar and Kerbar (2004).

South Asia is a study of contrasts, however. India's poorer neighbours seem to have overtaken her in terms of nutrition (Figure 3). In Nepal (17%) and Bangladesh (19%), a smaller proportion of women are underweight than in India (23%). Similarly, Bangladeshi (42%) and Nepali (41%) women are

Figure 3. MALNUTRITION OF INDIAN WOMEN AND CHILDREN IS HIGHER THAN IN POORER SOUTH ASIAN NEIGHBOURS



* Women deemed thin have a body mass index of less than 18.5 kg/sqm.

Source: India: National Family Health Survey 2015-16 (IIPS and ICF International 2017), Bangladesh: Demographic and Health Survey 2011 (National Institute of Population Research and Training (NIPORT), Mitra and Associates and ICF International 2013), Bangladesh: Demographic and Health Survey 2014 (National Institute of Population Research and Training (NIPORT), Mitra and Associates and ICF International 2016) and Nepal: Demographic and Health Survey 2016 (Ministry of Health of Nepal, New ERA and ICF International 2017).

more than 10 percentage points less likely to be anaemic than Indian women (53%). Among children, too, a smaller proportion are underweight in Nepal and Bangladesh than in India, while a larger proportion of Indian children are stunted (Figure 3).

WHY ARE INDIA'S SOUTH ASIAN NEIGHBOURS DIFFERENT?

So, how have women and children in India's poorer neighbours achieved better nutritional outcomes? Do Bangladeshi and Nepali women also eat last? And if not, why not?

To shed light on this question, our research team conducted a cross-border primary field survey in South Asia, interviewing 1,600 households in four districts of three contiguous regions with socio-cultural similarities – the Panchagarh district of Bangladesh, the Sindhuli district of Nepal and the Indian state of Bihar (Hindu-dominated Muzaffarpur and Muslim-dominated Kishanganj). To decipher the puzzle of household distribution of food, women of reproductive age (15-49 years) in randomly selected households were asked four questions on maternal buffering, eating habits, levels of hunger and dietary diversity.

Maternal buffering

Even in impoverished homes, mothers' access to food is often restricted by the culturally extolled self-sacrificial practice of 'maternal buffering'. In Africa, for example, particularly in times of food insecurity, mothers have often

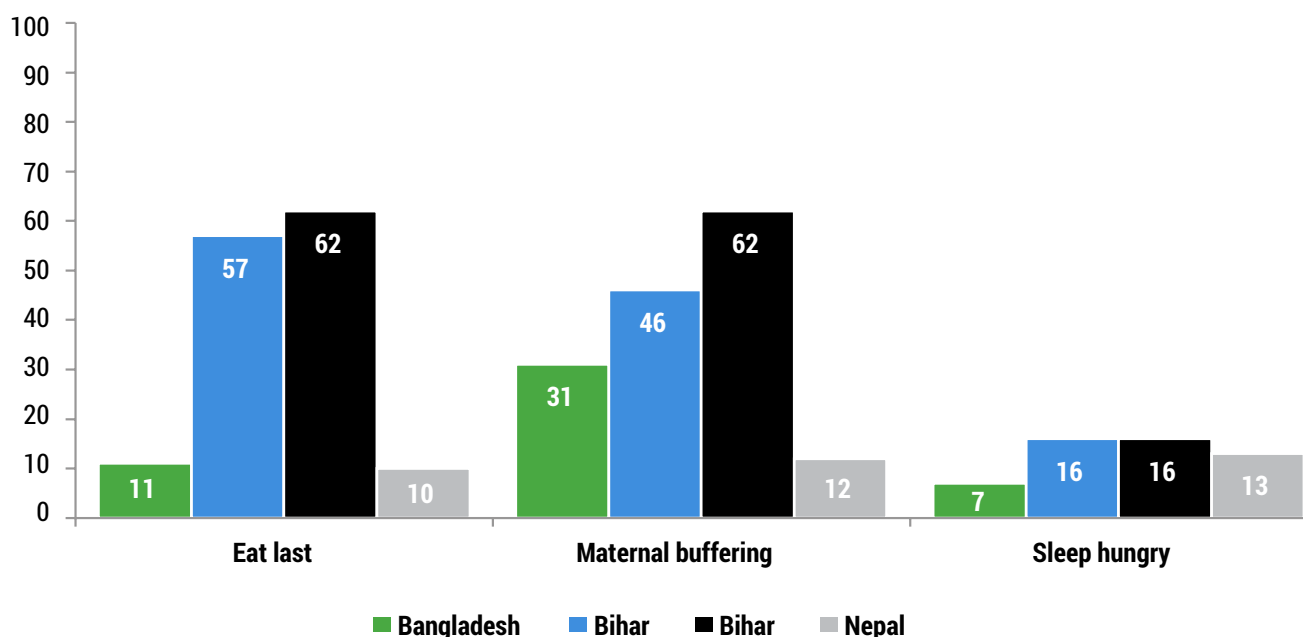
been observed deliberately reducing their food portions to ensure that their children and husbands get more to eat (Maxwell 1996).

In our survey, we asked whether women had practised maternal buffering in the previous three months. Sixty-two percent of mothers questioned in the Hindu-dominated Muzaffarpur district of Bihar admitted to eating less to ensure that their husbands and children had more to eat (Figure 4). The practice was less common in the Muslim-dominated Kishanganj district (46%). In contrast, in the Bangladeshi area, only 28% of mothers said they sacrificed their own food for the good of their families. Indeed, one respondent was vociferous in her denials, claiming that "if rice falls short, we go back to the kitchen and cook again".² In Nepal, however, despite the near-negligible prevalence of maternal buffering (12%), a mother in an acutely impoverished lower-caste family in the terai region near the Indian border admitted that, "men always eat first and we eat their *jhoota* (leftovers)" and "of course we have often slept hungry at night, as we eat less to feed our husbands and children more".³ The influence of regressive Hindu food-distribution practices seems hard to overcome.

² Field Notes Panchpir Union, Boda Upazila, 1-4 March 2016, Bangladesh.

³ Field Notes Sirthouli VDC, 25-31 May 2016, Nepal.

Figure 4. NUTRITION PRACTICES ACROSS SOUTH ASIAN BORDERS



Eating last

More than half of the female survey respondents in both of the Bihari districts admitted to eating last at dinner the previous night. In village homes, it is often the daily routine of emaciated women who labour for hours to prepare each meal to wait until the men of the household have eaten before consuming their leftovers. In one of the villages, my octogenarian host routinely referred to her husband as *mallik* (master). She also explained with rustic logic and lucid clarity that she had no trouble eating leftovers from his half-eaten plate, as husbands are considered to be equivalent to holy deities and the foods tasted by them to be *prasad* (foods imbued with divinity after being blessed by the Gods).⁴ Even in Muslim families in Bihar, there is a greater tendency for women to eat after the men.

In one lower-caste family we stayed with, every night, we saw women eat leftovers from the same plate as their husbands. Even adolescent girls were not spared the daily tribulations of coping with hunger pangs, as I observed in my field notes:

*"It is around 10 pm and, finally, dinner is served. The father asks me to go to the room to eat separately, but [I] will have none of it. So, he tells me that there is a 'parampara' (tradition) that women must eat only after men ... As soon as the men and children finish their meal and the moment her husband gets up, the elderly mother hungrily drags his half-eaten plate of rice, left behind on the floor, and starts eating hurriedly from it. The daughter-in-law bustles around cleaning. She has prepared all the food, but is not allowed to eat until her father-in-law, husband and then mother-in-law finish. She will be the last to eat, sitting on the floor in a corner. Can also see from the corner of my eye the teenage daughter, who is studying in the 10th standard, sitting on a chair in the other room, seething with rage that I was offered food with the men simply because [I] am from the 'seher' (city). She is starving, has school tomorrow, but is still not permitted to eat. The men in the house are all rotund, while the women are weak and frail. Any guesses why? My blood boils."*⁵

In stark contrast, across the border in Bangladesh, our survey reveals that only 12% of women ate after their husbands the previous night. In fact, 23% of the Bangladeshi women we interviewed, especially those with infant children, claimed that the previous night, they ate before their husbands came home. During our fieldwork,

in our Bangladeshi Muslim host families, too, even though the women invariably assumed primary responsibility for cooking and serving meals, we all usually ate our dinner together, including at *iftar* to break the daily fast during the holy month of *Ramzan* (Ramadan).

In Muslim families around the world, commensality is prized. In the *Hadith*,⁶ which deals with the 'etiquette of eating', Prophet Mohammad is specifically quoted as extolling the benefits of commensality over solitary meals, "eat together and mention the Name of Allah over your food. It will be blessed for you."⁷ These culinary habits, along with the greater consumption of animal protein, positively impact women's nutrition. In India, Muslim women were found less likely to be anaemic than Hindus (Bentley and Griffiths 2003).

In Nepal also, despite being a predominantly Hindu society, only 9% of women in our survey district reported eating last, while 90% attested to eating together as a family. In upper-caste homes, in particular, there seems to be a panoply of strict eating customs that encourage commensality and which are usually taught in childhood, such as "only someone who has finished eating is allowed to serve someone who is still eating".⁸ Women in the Nepali district were also found to be more empowered than in Bihar.⁹

Sleeping hungry

Similar to the 2013 Public Evaluation of Entitlement Programmes (PEEP) survey (Drèze and Khera 2017), we enquired whether any family member had been forced to go to sleep hungry for want of food over the previous three months. In the Bangladeshi and Nepali districts, 93% and 97% of respondents, respectively, replied in the negative (Figure 4). In both of the Bihari districts, in contrast, 16% of respondents admitted that family members had often gone hungry at night. Indeed, several women were reticent about answering this question, though their downcast eyes and silences often spoke volumes.

⁶ Hadith refers to the records of the words and actions of Prophet Mohammad, which are highly revered by Muslims as ideal behavioural norms and traditions.

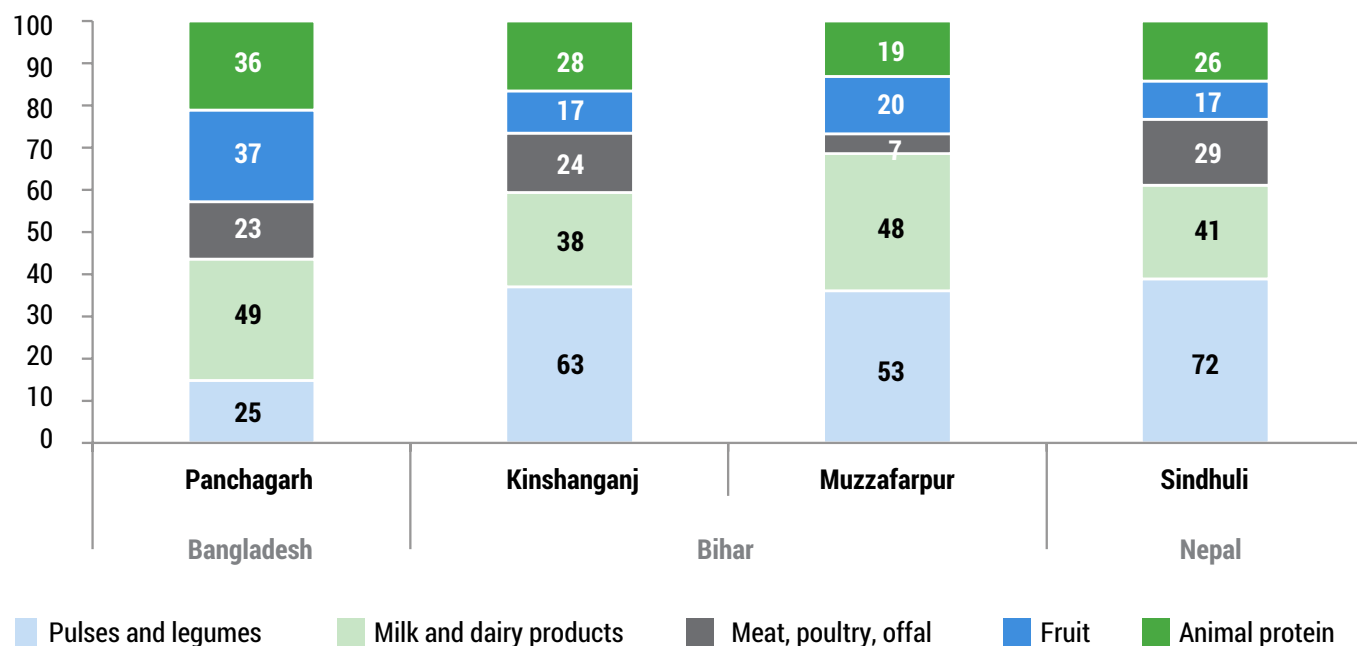
⁷ These verses are quoted in the Hadith by Wahshi bin Harb on the 'Etiquette of Eating', Book 3, Hadith 743 (Abu Dawud) <https://sunnah.com/riyadussaliheen/3/16> (last accessed 11 Sept 2017).

⁸ Field Notes, Ward 6, Bhimstan VDC, 16-22 May 2016, Nepal.

⁹ Based on a separate women's empowerment index, created as part of this research (Narayan 2018, *South Asia's Human Development Puzzle*, Tata Institute of Social Sciences, mimeo)

⁴ This social norm apparently harks back to nineteenth-century Bengal (Engels 1996).

⁵ Field Notes, Dighalbank block, Kishanganj district, 1-6 September 2017, Bihar.

Figure 5. WEIGHTED WOMEN'S DIETARY DIVERSITY

Notes: *Responses for vegetables, oils and carbohydrates were not plotted, as they were largely similar from region to region, though responses for vegetables and oils were recorded.
 **Animal protein combines eggs, fish, seafood, meat and poultry.

Source: Household survey 2016

Lastly, female respondents were asked to list what they had eaten the previous night. Their responses were used to compute Women's Dietary Diversity Scores (FAO and EU 2010) for each district across a range of standardized food groups, except carbohydrates. Additionally, weightings were assigned to each food group based on calories derived per gram.

As expected, the Bangladeshi district, where half the women had consumed fish the previous night, scored highest. The Muslim-majority Kishanganj district in Bihar, where women had eaten a combination of fish, meat and eggs as sources of animal protein, had an equally high score. Nepalese women had eaten less meat, but 72% had consumed protein in the form of pulses and legumes.

CONCLUSION

The analysis reveals the importance of focusing on gender discrimination in household diets as an oft-neglected, but pertinent issue in development economics. In South Asia, certain trends are evident:

- Gender discrimination is most acute in India, especially in the northern states and among Hindus.
- The 'double burden' of women often exacerbates their impoverishment and undernourishment. Every day, Indian women spend an average of five hours on childcare and domestic chores, while men spend only 52 minutes. This is not only one of the highest workloads globally, but also the most unequal (Narayan 2017).

Entrenched cultural practices are not immutable. There are several policy initiatives that could be employed to help erode nutritional gender discrimination within households, both in India and beyond:

1. Maternity benefits

The pioneering Indian National Food Security Act of 2013 made provision for a modest cash grant for all pregnant and lactating women for every child born. The intent was to prioritize, support and drive home the message of women's greater nutritional needs and ensure that they could rest after childbirth, take time off work, eat better and breastfeed their children for longer. However, five years after enactment, most of the 27 million pregnant women eligible annually have yet to receive the grant.

2. Food subsidies

Indian legislation (per section 13 of the National Food Security Act) offers families subsidized foodgrains, specifically allocated in the name of eldest woman as the head of the household in a bid to change patriarchal mindsets. Pregnant and lactating women are entitled to nutritious packets of take-home rations, though the latest 2015 Demographic and Health Survey shows that only half of mothers receive this benefit (IIPS and ICF 2017). In addition, the southern state of Karnataka recently began to offer freshly cooked, nutritious meals, with eggs and milk, at the nearest childcare centre for pregnant and lactating mothers – a programme that ideally should be replicated nationwide. Universal school meals in India also offer crucial life lessons in commensality, as students of different castes and genders learn to eat together at an impressionable age.

3. Women's employment

Satyajit Ray's classic Bengali film *Mahanagar* is an evocative depiction of the change in gender norms that occurs when a woman shifts from eating last in the household to eating alongside her husband after she gets a job. As succinctly described, "employment outside the home and owning assets can both be important for women's economic independence and power; and these factors may have far-reaching effects on the divisions of benefits and chores within the family and can greatly influence what are implicitly accepted as women's 'entitlements'" (Sen 1990). However, women's participation in India's paid formal and informal workforce, according to 2017 ILO-modelled estimates, is just 27%, compared with 79% for men. This is not only acutely low, but has also declined over the last two decades. It needs to change drastically, with the introduction of a range of women-friendly employment policies for different literacy and age groups.

4. Changing habits

The Rajasthan Nutrition Project (RNP), supported by non-governmental organisations, has encouraged 6,000 families in the drought-prone state to eat together, as a result of which women's food security has apparently doubled within two years (Pandey 2017). The government could undertake similar campaigns nationwide with the aid of mass media.

Most importantly, Indians need to learn how to cherish commensality from their South Asian neighbours. In particular, Hindu families need to imbibe from other religious communities the importance of breaking bread together. Not only is this simple practice of eating together likely to boost women's nutrition, but it may also bring families closer together and transform future generations.

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Equity in social and development-studies research: Insights for nutrition

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ABSTRACT

While much international nutrition research deals with certain aspects of equity, such as the disempowerment of women producing negative effects on nutrition outcomes, we argue that the nutrition field has only partly addressed equity issues in its research to date. The closely related disciplines of development studies and work on the social determinants of health have long histories of researching equity issues, and these ideas could be readily applied to research on global nutritional inequities. This paper reviews the treatment of equity in the relevant bodies of research and suggests ways in which international nutrition research could extend and deepen its treatment of equity issues using insights from these related fields of study.

INTRODUCTION

For some time now, food and nutrition research has acknowledged the importance of issues such as gender and income disparity in shaping interaction with development projects and national programmes, as well as in defining broader nutrition and health outcomes (Quisumbing et al 1995; Haddad 2015). However, poverty and patriarchy are just two of the many interacting facets of inequity that shape the lives of the nutritionally vulnerable. Access to services and systems (or the lack thereof) is also determined by issues such as life stage, ethnicity or race, geographic

location, sexual orientation, migratory status, literacy and disability, among other things, which are generally far less researched. Such marginalization, in turn, underpins disparities in nutrition and other outcomes, limiting human development and fuelling the transmission of disadvantage from generation to generation.

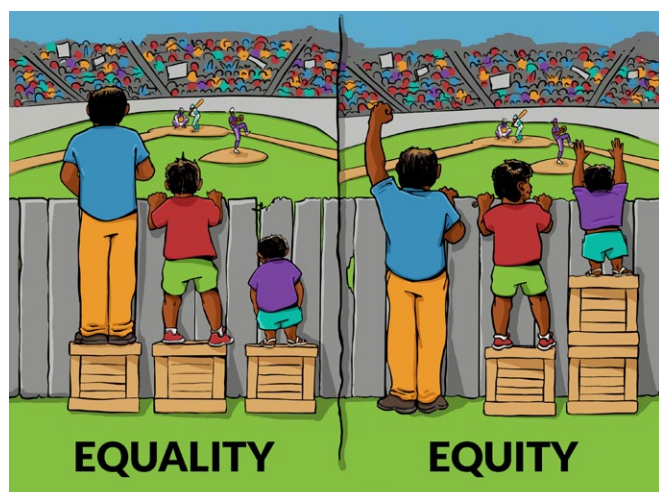
Such interlocking forms of inequity, marginalization or social exclusion have been studied for longer outside of the field of nutrition, most notably, in health research through work on the social determinants of health (Marmot et al 2008), as well as in broader development studies. Each of these fields treats the issue of equity in a more complete manner, so may be able to offer insights that would be useful to future research on food and nutrition.

Recognizing this, in 2017, the Agriculture for Nutrition and Health (A4NH) research programme commissioned a review of equity considerations throughout its work. This paper builds on that review and broadens the consultation to address equity in nutrition research more generally. It introduces the related concepts of marginalization, equity and equality and reviews them from the point of view of development studies and research into the social determinants of health. It suggests how nutrition researchers might consider the use of these concepts in their own work where equity is a factor. We hope that the paper will contribute to the nutrition equity debate and feed into discussions underway in the nutrition community on how to address the issue of equity more comprehensively in research.

CONCEPTUALIZING EQUITY

At the centre of much international nutrition research and practice is the unequal distribution of nutrition outcomes. Inequality of outcomes in nutrition and health – poorer sections of the population demonstrating greater rates of stunting, for example – are well recognized. It is also understood that such differences stem from disparities in the distribution of capabilities and resources, the fundamental factors that create broader inequities in access to underlying goods, services and knowledge. A focus on equity, therefore, naturally takes us into the realm of the 'basic' causes of malnutrition described in the UNICEF framework – issues highlighted as vital by the framework's creators (UNICEF 1990). Much nutrition research and practice has, however, focused on the potentially more tractable 'immediate' and 'underlying' levels to date. While inequality is assessed more frequently in nutrition than inequity however, most nutrition specialists understand the link between unequal outcomes and the inequitable processes that lead to them.

The concepts of equality and equity differ in subtle ways. They are both ethical concepts, generally seen as grounded in principles of moral equality: that all people count and should be treated as equals (Jones 2009). Equity and equality are thus normative concepts, based on how we think the world should be, but no more so than, say, aiming for economic growth or human rights, which are also choices based on value systems.



Equality is generally seen as being founded on aggregative principles, the same efficiency and utility principles underpinning much of development economics. This approach requires that social goods be distributed to achieve the “highest average levels of a good” (such as nutrition and health) and is, therefore, focussed on outcomes (Jones 2009).

Equity, in contrast, is founded on distributive justice (the socially just allocation of goods) (Jones 2009). This approach is not about final distribution, but about how that distribution is undertaken, so is focused on process. Equity requires “fair distribution according to need” or specific characteristics, such as populations marginalized by different personal or geographic attributes, or those most vulnerable to poor nutrition.

In common usage - whether in research or in practice - equity and equality have been used interchangeably. While there are important semantic differences in the concepts these words embody (not least the difference in focus on outcome or process), what matters in practice - and the definition that we adopt here - are *the complex and mutually reinforcing pathways between inequitable processes and unequal outcomes*. Unequal outcomes in, for example, an individual's health or education are tied to inequitable access to basic services, resources and political redressal. Inequalities in health and education outcomes are, themselves, inequities at the heart of further inequalities in the income and livelihood, life expectancy and opportunities available to future generations.

EQUITY IN DEVELOPMENT STUDIES AND HEALTH RESEARCH

Inequity and inequality have long been a central focus of the social sciences, given that sociology arose to explain the social differences arising from rapidly industrialising societies in the late 19th and early 20th centuries (Caillods and Denis 2016). Such attention has waxed and waned with broader geopolitical and economic trends, but there has been a renewed round of interest in inequality as ever-greater income disparities have opened up in Western economies over the past decades – suggesting a reversal in historical rates of progress (Piketty 2015) – amid broader evidence that unequal societies perform less optimally on a wide range of development indicators (Wilkinson and Pickett 2010, as cited in Caillods and Denis 2016). This has encouraged further debate on the multiple causes of other forms of inequality – political, social, cultural, environmental, spatial and access to knowledge (Leach et al 2016) – at both the national and global levels.

One of the most notable ways in which inequity and inequality have been understood within development studies is in terms of their multidimensionality, or 'intersectionality' with causes of marginalization tending to cluster together, intersecting and reinforcing each other. This makes some groups highly vulnerable to 'syndemic' diseases that interact with social vulnerabilities and other health conditions to synergistically enhance negative impacts (Singer et al 2017). Examples of these wider considerations include the intergenerational transmission of disadvantage in populations (including poverty, hunger, ill health and nutritional status); socio-cultural and institutional disadvantages, including detrimental norms related to gender roles, caste or ethnicity, geographical disadvantage¹ and chronic poverty, where many of these disadvantages come together and accrue into self-sustaining patterns of inequity and inequality (Jones 2009).

Underpinning this understanding of equity and equality is therefore a concern with power relations, as inequity and marginalization are ultimately caused by specific political and policy processes which are built on power imbalances. These power imbalances can occur at micro and macro levels, whether determining local access to services and broader agency, voice and representation in local decision making; or voice and representation in broader political decision making.

Imbalances of power tend to dictate what is available as evidence, knowledge or ideas and the framing of particular problems. This then leads to disparities in possible solutions² and the foreclosure of alternatives to the status quo (which tends to disadvantage marginalized groups to the benefit of existing elites).

Using power analysis (Sriram et al 2018) to understand this relationship between power and the political processes at

various levels is critical to 'denaturalising' forms of inequity and inequality in contemporary societies (i.e. to oppose the assumption that groups are poor for purely 'natural' reasons to do with resources, or because of their physical or intellectual characteristics) – an approach at the heart of two important and influential perspectives on entrenched inequities in health (Box 1).

Box 1. TWO HEALTH PERSPECTIVES ON ENTRENCHED INEQUITY – STRUCTURAL VIOLENCE AND THE SOCIAL DETERMINANTS OF HEALTH

"Structural violence is often embedded in longstanding 'ubiquitous social structures, normalized by stable institutions and regular experience'. Because they seem so ordinary in our ways of understanding the world, they appear almost invisible. Disparate access to resources, political power, education, health care and legal standing are just a few examples."

(Farmer et al 2006, p.1686)

"If systematic differences in health for different groups of people are avoidable by reasonable action, their existence is, quite simply, unfair. We call this imbalance health inequity..."

... [t]his unequal distribution ... is not in any sense a natural phenomenon but is the result of a combination of poor social policies and programmes, unfair economic arrangements and bad politics."

(Marmot et al 2008, p.1661)

Such applications have helped shift the focus from approaches that centre on the immediate manifestations of such inequities in terms of curative interventions, or public-health approaches concentrated on individual risk and behaviour, to broader and more preventative strategies that recognise individual outcomes and behaviours as being rooted in broader social and political processes that can be stemmed more effectively upstream (for an example of this in HIV/AIDS treatment, see Farmer et al (2006)).

The Commission on the Social Determinants of Health, for example, identified the need for a triple-track approach, focused on (1) improving a wide variety of efforts to tackle the daily living conditions that cause health problems, rather than the health problems themselves; (2) tackling the inequitable

¹ Where marginalized groups tend to be further from both political and economic power and important services, including access to health and agricultural extension services.

² A classic example being the focus on male farming practices/agronomy in agricultural research and extension, when it is now known that more women work in farming in most contexts, particularly in sub-Saharan Africa.

distribution of power, money and resources (requiring all sectors to work in partnership but, in particular, a strong equity-focused public sector and associated governance reforms); and (3) constant attention to both inequity-focused analysis (suitably disaggregated to highlight distributional differences between different groups) and the effectiveness of equity-focused solutions (Marmot et al 2008).

There are, therefore, some important concepts stemming from these disciplines which might usefully be applied to nutrition research on equity, such as the interaction and intersectionality of aspects of marginalization in creating inequity, the role of power among different groups in structuring inequity, and the need to focus explicitly on inequity in order to tackle it.

APPROACHES TO EQUITY IN FUTURE NUTRITION RESEARCH

A number of examples of applying equity and equality lenses to nutrition research already exist. A framework guiding this research might be broken down according to how inequities affect the various pathways to nutritional inequality described by the UNICEF framework. Within the 'food' pathways, for example, work on the social determinants of inequities in healthy eating has mapped available evidence on the direct (food system) and indirect pathways that influence "[w]hat, when, where and how much people eat" (Friel and Ford 2015, p.437). Evidence of governance and policy levers that influence broader socioeconomic, political and cultural contexts are also mapped (for example, the regulation of unhealthy food advertising, or agricultural and trade policy), in addition to types of intervention that influence the daily living conditions relevant to healthy eating (for instance, educational or workplace-based initiatives, broader access to nutrition knowledge through healthcare services and the governance of physical space and food retail) (Friel and Ford 2015).

A social-determinant perspective, therefore, already illustrates the types of analysis and intervention implied by an 'equity' framing of nutrition research and practice. There has not yet been an attempt to map what a comprehensive approach to equity and equality in nutrition research would look like across a research portfolio, however, and it is likely that measuring the different aspects of equity would be difficult instrumentally. A systematic review of existing work and an assessment of the gaps, while beyond the scope of the current paper, will be an important next step for the nutrition research community.

Nutrition researchers are often faced with seemingly intractable systemic inequities, and it is tempting to conclude that while we might all wish these away, there is little that can be done to address them. Broader development-focused frameworks, however, have outlined the types of policies and approaches known to affect equity and equality, for example policies focused on education and social protection; policies working at a macro-level focusing on macroeconomic investment in infrastructure or fiscal redistribution; and legislation prohibiting discrimination (Leach et al 2016). As a guide for thinking through these ideas, one useful set of principles for an equity agenda can be found in Table 1,³ alongside the implications for researchable nutrition actions.

³ This was a significant review in the field of development studies, summarising a large body of perspectives and research within the discipline. The authors have, therefore, used this framework as a catalyst to suggest new and as yet largely unexplored forms of nutrition equity research.

Table 1. PRIORITIES FOR AN EQUITY AGENDA (JONES 2009, P.26) AND IMPLICATIONS FOR NUTRITION (AUTHOR CONTRIBUTION)

Priorities for an equity agenda	Implications for nutrition
<p>1. Providing fair access to universal public services This means prioritising universal access to public services, such as health and education, and improving their quality by stepping up delivery and strengthening underlying institutions. Infrastructure and law and order are also crucial. Services should be free at the point of delivery wherever possible, and where this is not possible, arrangements should be made to ensure that poor people are not excluded.</p>	<ul style="list-style-type: none"> • Universal access to nutrition services, such as growth monitoring and the treatment of acute malnutrition. • Universal access to services relating to the underlying determinants of nutrition, such as health services, immunization, agricultural extension, nutrition education and safe drinking water. • Clear process for ensuring that specific groups are not excluded from access.
<p>2. Targeted action for disadvantaged groups Government spending should favour disadvantaged regions or groups. Quotas can support access to employment for certain excluded groups. Services targeted at these groups are crucial (e.g. education for girls), as is providing assistance at key stages of development, such as early childhood. Empowering these groups is vital, in addition to strengthening organizations such as producer associations or collectives, social movements and trade unions.</p>	<ul style="list-style-type: none"> • Disadvantage refers to those who are both socio-culturally disadvantaged (by ethnicity or gender, for instance) and nutritionally disadvantaged (in any way pertaining to the immediate, underlying or basic causes of malnutrition). • Traditionally, young children and pregnant and lactating women have been deemed particularly disadvantaged when it comes to nutrition and to be the groups that would benefit most from intervention. • More recently, other groups have been identified, such as adolescent girls and the elderly. • These disadvantages intersect with other entrenched forms of socio-cultural exclusion and lead to significant pockets of nutritional disadvantage, e.g., among the Adivasi communities in India or Mayan communities in Latin America.
<p>3. Social protection Social protection should be provided to ensure that nobody drops below a minimum level of wellbeing, beyond which unmet need will create cycles of disadvantage. Options include payments such as social insurance or basic income grants, conditional transfers to promote human development, minimum wage policies, guaranteed government employment programmes and labour-market regulations to those in employment.</p>	<ul style="list-style-type: none"> • Social protection can provide a nutritional safety net, either in the form of cash (where there are functioning food markets) or through the direct provision of food (where this will not undermine local coping mechanisms). • In some cases, the provision of social protection may be conditional on compliance with certain nutrition-related conditions, such as attendance at growth-monitoring or immunization clinics.
<p>4. Redistribution 'Downstream' action is required to improve equity by reducing inequality. Progressive taxation can help if the additional fiscal resources are used to fund interventions that support equity. Other priorities include lowering taxes on staple goods and levying taxes on property; inheritance tax is key. Land reform is also crucial and redistribution may be required to provide the poor with productive assets.</p>	<ul style="list-style-type: none"> • Land reform and title is important to redress basic societal inequities and may also be particularly important for broader agri-nutrition pathways, including own-food consumption, income and women's labour/time availability. • Fiscal- and trade-policy stimuli to make nutrient-dense foods more affordable would increase equitable access to nutritious diets. • Taxes on 'unhealthy' foods might be considered an equity intervention if the funds collected were reinvested in making other foods more affordable.
<p>5. Challenging embedded imbalances of power Power dynamics can cause and sustain inequity. Tackling harmful imbalances of power takes time, and the empowerment of disadvantaged people must be combined with improving accountability mechanisms and reforming democratic institutions. It is important to build a vibrant civil society and an independent media. Addressing unhelpful attitudes and beliefs can also help foster social cohesion and build a pro-equity social contract.</p>	<ul style="list-style-type: none"> • Imbalances of power – including between multinational food firms and small farmer suppliers, as well as between different groups of consumers – can be identified and addressed to make food systems more equitable. • Imbalances of power – including between those who make food and nutrition policy and those who are affected by it – can be addressed by supporting participation and accountability, for instance, through rights-based approaches.

From this and other recent reviews of equity policy and research, we suggest the following future areas of focus for future nutrition research on equity. This is a tentative list based on the prominent themes in the aforementioned areas; we suggest a further systematic review of the literature to help define such areas more comprehensively.

At a minimum, aspects of marginalization need to be considered more explicitly and comprehensively in data analysis in order to understand the inequality of outcomes.

Disaggregate data on multiple axes of marginalization.

Nutrition research will need to work to understand and highlight differences in nutrition outcomes along the most pertinent axes of marginalization in a given context and to find appropriate proxy indicators. This work will need to include appropriate comparison groups, as studies of equity and equality will always require a comparator (for example, poorest and least poor, men and women, dominant and marginalized ethnic groups, etc).

Consider the interaction between such variables and the outcomes of interest to discover mutually reinforcing 'intersectional' factors of inequity.

Even more important will be to understand how these aspects of marginalization interact to produce even more entrenched and damaging inequalities. There are certainly some 'quick wins' in researching equality of outcomes through comparisons among categories of marginalization such as wealth, land access and gender. Beyond this, it will be important to look at how different aspects of marginalization intersect to produce negative nutrition outcomes and look at the consequences (intended or unintended) of interventions for various groups that are likely to be marginalized in different contexts.

There is also, however, a need to understand some of the inequitable social and political systems, structures and processes that bring about marginalization in the first place.

Undertake research on the equitable delivery of services, including appropriate delivery channels and the targeting of specific groups, as well as broader food and health-system research. On access to public services, this can include researching coverage of delivery channels for the marginalized, reviewing health-service interventions

for greater equity of access and studying health-system strengthening processes with a view to improving nutritional outcomes (Barros et al 2010; Chopra et al 2012; Thomas et al 2015). On targeted action for marginalized groups, Carrera et al (2012) identifies greater impacts on stunting by focusing on the marginalized. UNICEF believes there is further scope to evaluate food and health interventions and policies along these lines (UNICEF 2017). A growing literature on redistribution through taxation on different foods, as well as land redistribution, could equally be evaluated for differential impacts on the nutrition of marginalized groups.

Bring power analysis into an understanding of what and who shapes nutrition policy processes.

Political or social research with a focus on power relations as underpinning equity can uncover where the power lies in food and health systems in order to address it. It can also look at how, for example, political approaches (such as food sovereignty) can complement the longer-term socio-political restructuring approaches that health and nutrition equity requires (Weiler et al 2015).

These approaches to equity and equality research are not mutually exclusive. For instance, social protection can also be combined with rights- and legislation-based strategies to tackle disadvantage in systems of 'transformative social protection' (Devereux and Sabates-Wheeler 2004). There is also scope to research the impacts of these combined approaches for nutrition in marginalized groups.

Work on equity in nutrition can, therefore, usefully be informed by existing conceptual and practical work in the field of development studies, in particular the field of health equity research, and there is a wide range of work left to be undertaken on equity in nutrition. There are differences in definition and emphasis in equity research in different research traditions, but concepts such as marginalization, intersectionality and power relations can take nutrition research forward into new ways of understanding how nutritional inequalities develop and become intergenerationally entrenched for different groups of people and how inequity can be tackled at source.

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FAO/PABALLO THEKISO

Entitlements and Rights

Children's rights, childhood obesity and health inequalities

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ABSTRACT

This article focuses on the relationship between unhealthy food marketing, obesity, health inequalities and children's rights. In particular, it reflects on the extent to which a children's rights-based approach to the regulation of unhealthy food marketing can promote more effective obesity- and non-communicable disease-prevention strategies and thus help reduce health inequalities. After establishing that food marketing increases health inequalities, it calls for the recognition that food marketing has become a major children's rights concern that requires States to effectively implement the World Health Organization's (WHO) Set of Recommendations on the Marketing of Foods and Non-Alcoholic Beverages to Children (WHO 2010a).

INTRODUCTION

Childhood obesity and related non-communicable diseases (NCDs) have grown rapidly over the past 20 years and their prevention has become one of the most pressing public-health concerns globally. The number of obese children and adolescents (aged 5-19 years) worldwide has risen tenfold in the past four decades, from 11 million in 1975 to 124 million in 2016 (NCD Risk Factor Collaboration 2017).¹

Once considered a problem for high-income countries (HICs), overweight and obesity rates are rising quickly in low- and middle-income countries (LMICs), where the rate of increase has been more than 30% higher than that of developed countries (WHO 2014). This is particularly worrying, as obesity is a major risk factor for a broad range of NCDs, including cardiovascular diseases, diabetes, musculoskeletal disorders and some cancers (WHO 2016a). Childhood obesity, more specifically, is associated with a higher chance of obesity, premature death and preventable disability in adulthood. It also affects a child's immediate health, education attainment and quality of life – not least because obese children are more likely to be subjected to stigma, prejudice and discrimination as a result of their obesity² (Puhl and Heuer 2010; Janssen et al 2004).

Obesity's potential to reverse many of the health benefits contributing to increased life expectancy make it an urgent concern (WHO 2016a). Beyond the individual harms it causes, obesity is increasingly associated with significant socio-economic consequences (Second International Conference on Nutrition 2014). Thus, the Sustainable Development Goals (SDGs)³ urge "all countries and all stakeholders" to "end hunger, achieve food security and improved nutrition and promote sustainable agriculture" (SDG 2) and to "ensure healthy lives and promote well-being for all at all ages" (SDG 3) (UN 2015).

¹ In 2016, an additional 213 million were overweight.

² Stigmatization is sometimes even an intentional component of public health campaigns (Hartlev 2014).

³ <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Obesity is also associated with health inequalities, both within and between countries (Commission on the Social Determinants of Health (CSDH) 2008; Marmot 2005; Bleich et al 2012). Not only are obesity rates increasing much faster in LMICs – over-nutrition appears to be increasing without an accompanying decrease in rates of under-nutrition (Ulijaszek et al 2017) – but health inequalities in childhood obesity are also strongly associated with belonging to a socio-economic position group consuming more energy-dense diets (Wang and Lim 2012).

In HICs, there is an inverse association between the socio-economic position of a child and their obesity status (Zarnowiecki et al 2014). This is amplified in some groups, especially in relation to ethnicity, sex and other family circumstances (Brug et al 2012; Gupta et al 2012; Robinson et al 2012; Garasky et al 2009). In LMICs, there are links between childhood obesity and factors of both higher socio-economic position, such as wealth, and lower socio-economic position, such as lower levels of education and maternal malnutrition during gestation (Popkin and Slining 2013; Ulijaszek et al 2017). These obesity-related inequalities are likely to continue over the course of a child's life and thus also have a harmful impact on health and longevity in their adult lives (Case et al 2005; Connell et al 2014).

The NCDs and inequalities associated with childhood obesity raise the question of what is required from States to ensure that individuals and their families are supported in making healthier decisions, so that the prevalence and burden of NCDs and health inequalities can be durably reduced (WHO 2016b).

Childhood obesity results from a combination of the child's exposure to an unhealthy environment, and the behavioural and biological responses of the child to that environment, with the individual child's response to the environment deeply influenced by developmental and life course factors. The combination of changes in the environment, including food consumption – unhealthy food⁴ being cheaper, more readily available and ubiquitously marketed – and a decline in physical activity, results in an obesogenic environment, leading to energy imbalance (WHO 2016b).

These upstream causal factors are not controlled by children, so childhood obesity is not the result of voluntary choices, especially when it comes to younger children (WHO 2016b). As obesity is not exclusively a matter of personal responsibility (Brownell et al 2010; Pearl and

Lebowitz 2014; Brownell 1991; Minkler 1999), creating an environment conducive to healthy behaviour is recognized by the international community as a matter of societal responsibility (UN General Assembly 2012; WHO 2004; WHO 2010a; WHO 2013).

One avenue worth exploring is the added value of a children's rights approach to obesity and NCD prevention. In September 2011, the UN General Assembly, in its Political Declaration on NCDs, reaffirmed "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health" and recognized "the urgent need for greater measures at the global, regional and national levels [...] in order to contribute to the full realization of the right of everyone to the highest attainable standard of physical and mental health" (UN General Assembly 2012, p.2).

Two years later, the WHO Global Action Plan on the Prevention and Control of NCDs 2013-2020 highlighted the imperative to place a human-rights, equity-based principle at its core.⁵ More recently, the WHO Commission on Ending Childhood Obesity reaffirmed the fundamental importance of the child's right to the highest attainable standard of health in guiding States' efforts to address this major public-health challenge:

"Government and society have a moral responsibility to act on behalf of the child to reduce the risk of obesity. Tackling childhood obesity resonates with the universal acceptance of the rights of the child to a healthy life as well as the obligations assumed by State Parties to the Convention of the Rights of the Child." (WHO 2016a, p.8)

A children's rights-based approach works towards strengthening the capacities of right-holders (children) to understand and realize their rights and those of duty-bearers (States) to meet their legal obligations under the UN Convention on the Rights of the Child (CRC)⁶ and other legally binding international human-rights instruments. By imposing legal obligations on States, a children's rights-based approach guarantees a degree of State accountability, making

⁴ The term 'unhealthy food' is used to refer to energy-dense, nutritiously poor foods and non-alcoholic beverages that are high in fats, added sugar or salt.

⁵ Similarly, the WHO's Global Action Plan for the Prevention and Control of Non-Communicable Diseases 2013–2020 places a human-rights, equity-based principle at its core (WHO 2013).

⁶ <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>.

effective remedies more likely where rights are violated. A children's rights approach supports the monitoring of State commitments and has the potential to translate the commitments and obligations enshrined in the CRC into operable, durable and realizable entitlements. Furthermore, as children's rights are inalienable and universal, the language of human rights can ensure that a given issue is afforded special consideration in public policy (for more, please see UNICEF 2018; Garde et al 2017b).

This short article focuses on the relationship between unhealthy food marketing, obesity, health inequalities and children's rights. In particular, it reflects on the extent to which a children's rights-based approach to the regulation of unhealthy food marketing can promote more effective obesity and NCD prevention strategies and thus help reduce health inequalities. After (1) establishing that food marketing increases health inequalities, (2) it calls for the recognition that food marketing has become a major children's rights concern, which (3) requires that States effectively implement the WHO's Set of Recommendations on the Marketing of Foods and Non-Alcoholic Beverages to Children (WHO 2010a).

1. Unhealthy food marketing as a contributor to childhood obesity and health inequalities

There is unequivocal evidence that the marketing of unhealthy food is linked to preferences for unhealthy food, consumption of unhealthy diets and, therefore, to childhood obesity (WHO 2016b). This is particularly problematic from the perspective of health inequalities in at least two respects.

I. Exposure to advertising. Not only do children tend to be exposed to marketing more than adults (Lodolce et al 2013), but children from lower socio-economic positions tend to be exposed to a greater degree of marketing than children from higher socio-economic positions (see, for example, Grier and Kumanyika 2010) through a broad range of media, including television (Adams et al 2011b and 2012), magazines (Adams and White 2009), outdoor advertising (Adams et al 2011a) and the placement of fast-food outlets (Smoyer-Tomic et al 2008; Hobbs et al 2017). Moreover, such marketing is often targeted specifically at these groups (Grier and Kumanyika 2011), thereby amplifying their pre-existing vulnerabilities. Digital marketing methods are even more of a concern, as they can target children with precision (Montgomery 2015; WHO 2016).

II. The impact of advertising. Children's particular susceptibility to unhealthy food marketing is heightened for those from a lower socio-economic group, including children from LMICs (Cairns et al 2013). It has been found, for example, that these children tend to change their food preferences after only brief exposure to marketing (Kumanyika and Grier 2006). Furthermore, overweight and obese children – who may already have been negatively impacted by unhealthy food marketing – are more susceptible to such marketing than non-overweight children (Halford 2007).

States, however, have done very little overall to restrict the marketing of unhealthy food to children. They have opted to focus their efforts on conveying nutritional information to consumers in an attempt to foster awareness of the quality of the food available to them, rather than adopt measures intended to change food environments by reducing the accessibility and affordability of unhealthy food and promoting those of healthier food.

Increasing consumer information is helpful in better fulfilling the right of consumers to information, as well as empowering individuals to make healthier choices for themselves and their families. Still, if information-disclosure requirements are not part of a broader strategy, their contribution to obesity prevention will inevitably be very limited. Furthermore, for information to work most effectively, consumers need to be exposed to and perceive relevant, sufficient and reliable (i.e. not misleading) information, which they can understand and which allows them to draw correct inference on the healthiness of food.

However, we know that consumers do not always perceive and understand the information provided and, even when they do, they are subject to biases and information heuristics. For example, we tend to give preference to short-term pleasures of taste over longer-term health goals (Grunert et al 2010; Grunert and Wills 2007; Grunert 2002). These cognitive limitations are magnified in members of lower socio-economic position groups. For instance, poverty has psychological consequences, including stress and negative affective states, which lead to short-sighted and risk-averse decision-making, which reinforce habitual behaviours (Haushofer and Fehr 2014).

Similarly, poorer members of society will more often have to make decisions that require volition, which draws on finite psychological resources, so that earlier acts to maintain willpower for healthy decisions will have detrimental impacts on later attempts to do the same. This decision fatigue is more common in members of lower socio-economic groups. Moreover, rationality is not always a reliable determinant of

consumer decisions, as consumer behaviour is multifaceted (Gokani 2018). This is particularly the case among members of lower socio-economic groups, for whom access to affordable, healthy food may be more difficult (Drewnowski 2004).

Restricting the marketing of unhealthy food, particularly to children, provides a much more promising way to promote healthier food environments and protect children's rights – all the more so as marketing restrictions are likely to have a greater positive impact on disadvantaged children, thereby contributing to greater equalities in health (Friant-Perrot and Garde 2014).

2. Unhealthy food marketing to children as a major children's rights concern

Unhealthy food marketing negatively affects a broad range of children's rights, which are protected under the CRC, not least, the right to the enjoyment of the highest attainable standard of health and related rights. This short article draws on the report that the United Nations Children's Fund (UNICEF) commissioned from the Law & Non-Communicable Diseases Unit of the University of Liverpool, published in April 2018 (UNICEF 2018). Readers are referred to this report for a fuller analysis of the relationship between food marketing and children's rights (see also Ó Cathaoir 2017).

The right to enjoy the highest attainable standard of health (often referred to as the right to health) is a universal human right. Specifically, it is protected by Article 24 of the CRC, which requires that "States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health" (Article 24(1)) and specifically "combat disease and malnutrition [...] through, inter alia, the provision of adequate nutritious foods" (Article 24(2)(c)).

The Committee on the Rights of the Child has issued a General Comment on Article 24⁷ and interprets the child's right to health broadly as "an inclusive right, extending not only to timely and appropriate prevention, health promotion, curative, rehabilitative and palliative services, but also to a right to grow and develop to their full potential and live in conditions that enable them to attain the highest standard of health through the implementation of programmes that address the underlying determinant of health"⁸ (Committee on the Rights of the Child 2013, p.3).

As such, the right to health has an important role to play in disease prevention, including childhood obesity and related diseases (WHO 2016b). States must fulfil children's right to health to the maximum extent of their available resources and, where needed, within the framework of international cooperation.⁹ The notion of the "highest attainable standard of health" takes into account both the child's biological, social, cultural and economic conditions and the resources available to the State, supplemented by other resources made available by others, including NGOs and the international community. States must, therefore, provide equality of opportunity for every child to enjoy the highest attainable standard of health (as opposed to any standard of health) (UNICEF 2018).

The lack of explicit reference to childhood obesity in the text of the CRC itself does not exempt States from their obligation to adopt effective obesity prevention strategies. "Children's health is affected by a variety of factors, many of which have changed during the past 20 years and are likely to continue to evolve in the future".¹⁰ States must, therefore, interpret the Convention in a dynamic manner and address the concerns affecting children at the present time, not as they were when the Convention was adopted, when obesity was not seen as a major global health issue.

An increasing number of statements by various UN Agencies and Special Rapporteurs confirm that the marketing of unhealthy food to children has become a children's rights concern. In particular, the Committee on the Rights of the Child has noted that the food industry spends billions of dollars on persistent and pervasive marketing strategies that promote unhealthy food to children. It has called for children's exposure to fast foods to be limited and for the marketing of them, "especially when [it] is focused on children", to be regulated. It further believes that their availability in schools and other places should be controlled.¹¹

In a number of recent State Reports, the Committee has also called on countries with high obesity rates to regulate unhealthy food marketing to ensure that they comply with their obligations under the CRC, thus emphasizing that childhood obesity is increasingly viewed as a major children's rights issue. As Anand Grover, then UN Special Rapporteur on the Right to Health, put it in 2014:

7 Committee on the Rights of the Child, General Comment 15: <http://www.refworld.org/docid/51ef9e134.html>.

8 Ibid, paragraph 1.

9 Convention on the Rights of the Child, Article 4: <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>.

10 Committee on the Rights of the Child, General Comment 15(5)

11 Ibid, paragraph 47

“Owing to the inherent problems associated with self-regulation and public–private partnerships, there is a need for States to adopt laws that prevent companies from using insidious marketing strategies. The responsibility to protect the enjoyment of the right to health warrants State intervention in situations when third parties, such as food companies, use their position to influence dietary habits by directly or indirectly encouraging unhealthy diets, which negatively affect people’s health. Therefore, States have a positive duty to regulate unhealthy food advertising and the promotion strategies of food companies. Under the right to health, States are especially required to protect vulnerable groups such as children from violations of their right to health.” (Grover 2014, p.11)

3. The effective implementation of the WHO Recommendations as the cornerstone of a children’s rights-based approach to obesity prevention

In light of the unequivocal evidence linking unhealthy food marketing to childhood obesity (Boyland and Tatlow-Golden 2017), we argue that States, as part of their duty to respect, protect and fulfil the right to health, the right to food and other related rights, should implement the WHO Recommendations and restrict such marketing with a view to reducing its negative impact on children and the enjoyment of their rights.

The WHO’s set of Recommendations on the Marketing of Foods and Non-Alcoholic Beverages to Children fleshes out the provisions that States should adopt to comply with their obligations under the CRC to respect, protect and fulfil children’s right to health, their right to food and all the other rights that are negatively affected by unhealthy food marketing. These Recommendations are evidence based and were unanimously adopted by the World Health Assembly (WHA) in May 2010¹² (for the genesis of and an introduction to the Recommendations, see Garde and Xuereb 2017).

In May 2012, the WHO published a framework implementation report to provide technical support to Member States in implementing the Recommendations and in monitoring and evaluating their implementation. The report is designed to draw their attention to key issues arising at the different stages of the policy cycle, from policy development to policy implementation, policy monitoring and policy evaluation (WHO 2012).¹³ Repeated calls have been made on States to ensure that the Recommendations are properly implemented (WHO 2013; WHO 2016b). Nevertheless, they remain poorly implemented to date (Kraak et al 2016; Garde and Xuereb 2017).

The WHO Recommendations should be seen as a guide for actions that States should consider in order to end childhood obesity. As such, they have the potential to support a children’s rights-based approach to obesity prevention, even though they do not specifically refer to children’s rights.

The Recommendations call on States to reduce the impact of unhealthy food marketing to children and urge them to adopt policies to tackle the two main components of marketing: (1) the exposure, or reach and frequency of the marketing message and (2) the power, or creative content, design and execution of the message. They call on governments to set clear definitions, including:

- The age group for which restrictions shall apply (namely, defining who a ‘child’ is for the purposes of the Recommendations);
- The communication channels, settings and marketing techniques to be covered, bearing in mind the Recommendations’ broad definition of the central notion of ‘marketing’;¹⁴
- What constitutes marketing to children, according to factors such as product, timing, viewing audience, placement and content of the marketing message; and
- What foods fall within the scope of marketing restrictions (what constitutes unhealthy food).

Member States are specifically requested to define settings where children gather and ensure that they are free from all forms of unhealthy food marketing. As Recommendation 5 states, these settings include, but are not limited to, nurseries, schools, school grounds and pre-school centres, playgrounds, family and child clinics and paediatric services (including immunization programmes), as well as during any sporting and cultural activities that are held on these premises.

¹³ Both the Recommendations and the framework implementation report are available at: <http://www.who.int/dietphysicalactivity/marketing-food-to-children/en/index.html>.

¹⁴ The Recommendations define the notion of marketing as “any form of commercial communication or message that is designed to, or has the effect of, increasing the recognition, appeal and/or consumption of particular products and services. It comprises anything that acts to advertise or otherwise promote a product or service”.

However, there are many additional settings – which may vary significantly from one State to another – where children commonly gather, such as public playgrounds, swimming pools, summer schools and programmes, afterschool programmes and sporting events. The settings also include temporary displays or gathering points for children, such as activity areas created for children in airports, community centres, places of worship and shopping malls. Finally, and as the WHO framework implementation report points out, the areas surrounding “settings where children gather” are also worth considering, for example, where food-business actors use highly prominent billboards to promote their goods and services very near schools (WHO 2012, p. 22).

The WHO Recommendations explicitly recognize the greater potential of a comprehensive approach that restricts all forms of unhealthy food marketing to children to achieve the desired result. By contrast, a stepwise approach is, by definition, more selective in nature and vulnerable to leaving gaps in the regulatory framework. A children’s rights approach to food-marketing regulation requires that the outstanding challenges and loopholes are both recognized and addressed at the national, regional and global levels. In particular, States should be cognizant of the fact that if they regulate unhealthy food marketing too narrowly, marketing is likely to shift:

- From regulated to unregulated programmes (e.g. from children’s programmes to general programmes with a high children’s audience in absolute numbers);
- From regulated to unregulated media (e.g. from broadcast to digital media, packaging or sponsorship);
- From regulated to unregulated marketing techniques (e.g. from licensed to equity brand characters); and
- From regulated to unregulated settings (e.g. from schools to other settings where children gather).

The restrictions that the UK introduced a decade ago on unhealthy food marketing in and around children’s television programmes demonstrate the limits inherent in a stepwise approach, allowing for a shift of marketing investment from children’s to adult airtime. A high number of children watch mixed-audience programmes that fall outside the scope of the prohibition. As a result, the overall effectiveness of the rules introduced to protect children from the harmful impact of unhealthy food marketing is limited, as the UK broadcast regulator has recognized.

In its evaluation of July 2010, Ofcom highlighted the high compliance rate of broadcasters with both the letter and the spirit of the scheduling restrictions, noting that between 2005 and 2009, children saw at least 37% less unhealthy food advertising. Nevertheless, it also found that the

volume of unhealthy food advertising aired throughout the day had increased and that children only saw 1% less unhealthy food advertising overall in adult airtime (Ofcom 2010; Adams et al 2011b and 2012).¹⁵

Researchers at the University of Liverpool went further and concluded that, despite regulation, children in the UK were exposed to more television advertising for unhealthy than healthy food items, even at peak children’s viewing times (Boylard et al 2011). Mixed-audience programmes, such as family shows and sporting events, are frequently used to promote unhealthy food and are classic examples of the artificial separation of ‘direct’ and ‘indirect’ marketing: what should count is the actual exposure of children to unhealthy food marketing, not the classification of a programme.

A children’s rights-based approach mandates States to protect all children, including adolescents. While the CRC does recognize that children’s vulnerabilities may vary from one stage of childhood to another, it applies to all children¹⁶ and does not exempt States from their obligations to protect them from harm, including the harm stemming from unhealthy food marketing. The research focusing on children’s cognitive development assumes that at a certain age, their cognitive abilities will be sufficient to protect them from adverse advertising influences. However, one needs to be wary of assumptions about older children’s media literacy in recognizing and resisting marketing (for more, see WHO Regional Office for Europe 2016).

An increasing number of studies have called for a paradigm shift, arguing that States should not only consider whether children have the cognitive capacity to identify the persuasive intent of advertising, but also whether teenagers (older children) possess the same resistance as adults to commercial advertising. Advertising can manipulate consumer behaviour through implicit persuasion, which may, in turn, explain why cognitive defence would not protect older children (Nairn and Fine 2008; Harris et al 2009).

This is compounded by the fact that during childhood and adolescence, children’s brains are biased towards rewards and they are more likely to respond to cues in their environment, including marketing (Casey 2015). Unlike adults, however, children may not activate areas of the brain that are important for inhibitory control, as these areas are less developed (van Meer et al 2015).

¹⁵ Researchers from Newcastle University concluded that children were exposed to the same level of unhealthy food advertising as they were before the Ofcom rules came into force, confirming that children were still exposed to unhealthy food advertisements during programming that was not specifically aimed at them (Adams 2012).

¹⁶ Article 1 of the CRC defines a ‘child’ as every human being under 18 years of age.

As food selection is primarily a response of the human visual system, food marketing can promote over-consumption (van Meer et al 2016). Such responses may be augmented in overweight and obese children, encouraging additional over-consumption (Bruce et al 2010; Stice et al 2008; Yokum et al 2011; Davids et al 2010). This thinking is further supported by findings that obesogenic environments interfere with consumers' ability to act in their long-term interests by inducing a preference for unhealthy food (Wansink 2011; Oullier and Sauneron 2010; Just et al 2007; Wansink and Chandon 2006; Étilé 2013; Institut National de la Santé et de la Recherche Médicale (INSERM) 2017).

The approach proposed here would not lead to the marginalization of the role of parents, who are primarily responsible for the upbringing of their children. Rather, it would empower them by modifying the environments that encourage obesity, helping them to better care for their children and thus discharge their parental responsibilities, as recognized by the CRC.¹⁷

¹⁷ For a more detailed account of the implementation of the WHO Recommendations in the UK, see Garde et al 2017.

CONCLUSION

As Amartya Sen notes, reducing inequalities is about restoring the capability of individuals to access a nutritionally balanced diet (Sen 2009). Dietary choices should not be purely theoretical, but achievable by all. Equal access to food for all entails a rethink of 'freedom' as the substantive empowerment of individuals, regardless of their environment and resources, to access healthy food.

Effectively regulating unhealthy food marketing is part of what States must undertake to change food environments, end childhood obesity, promote children's rights and reduce health inequalities. It is only then that all children, including the most vulnerable, will be properly protected from the harmful impact that unhealthy food marketing and other commercial determinants have on them.

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Transformative potential: How the Right to Food can help combat malnutrition

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After declining for many years, the number of undernourished people globally has risen to 815 million, up almost 40 million from previous years (FAO et al 2017).¹ At the same time, data suggests that more than 1.9 billion adults and 38.3 million children under the age of five are overweight (WHO 2017; UNICEF et al 2018), while billions of people suffer from micronutrient deficiencies, particularly children and women² (De Schutter 2011). This 'triple burden' of malnutrition – undernutrition, over-nutrition, and micronutrient deficiencies – has devastating effects on the health and wellbeing of communities around the world, as well as long-term impacts on the environment, the global economy, future generations and the ability of individuals to flourish and lead fulfilling lives.

Policymakers looking to address the 'triple burden of malnutrition' have many tools at their disposal. One such tool – which is often both overlooked and misunderstood – is the Right to Food. The Right to Food, as set out in the Universal Declaration of Human Rights and other international legal instruments, can be a powerful means of steering public policy towards reducing malnutrition. It has implications for how countries engage in poverty alleviation, agricultural development and the provision of social protection. Based in respect for human dignity, a commitment to sustainability and a holistic approach to food-system governance, the Right to Food, when recognized and realized, has transformational potential to address malnutrition today and in the future.³

This paper explores how the recognition and realization of the Right to Food can act as a platform for ensuring that individuals and communities gain access to more nutritious diets and better nutritional outcomes.⁴ It begins with a brief description of the Right to Food and how this differs from the concept of food security, particularly in relation to nutrition, then outlines efforts to incorporate the Right to Food into legislation and policy, citing some key examples. Finally, it explores how the Right to Food can help to reduce malnutrition in a long-term, systemic and transformational way.

RIGHT TO FOOD AND FOOD SECURITY

Policymakers have a number of tools from which they can draw in their efforts to reduce malnutrition. These tools include different conceptual frameworks for examining and addressing malnutrition. In this respect, food security is often the lens used, but it is not the only option. While food security and the Right to Food may appear similar and do have some overlap – indeed, the realization of the Right to

¹ Figures indicate 815 million undernourished people in 2016 and 777 million in 2015 (FAO et al 2017).

² Iodine, vitamin A, iron zinc, calcium, vitamin D and folate deficiencies are the main forms of micronutrient deficiency globally. For example, almost 40% of pregnant women and more than 40% of children under the age of five in developing countries are anaemic, many due to iron deficiency (UNICEF 2015).

³ For more on the transformational potential of the Right to Food beyond addressing malnutrition, see De Schutter (2014).

⁴ The many initiatives currently underway to address global malnutrition, such as the Scaling Up Nutrition (SUN) initiative, and the extent to which they include or would benefit from a rights-based mandate, are beyond the scope of this paper.

Food can be one means of achieving food security – they are distinct concepts, with very different notions of nutrition and implications for policy and government action. Below, we highlight the fundamental differences between the concepts and show how the Right to Food, in particular, offers a powerful and useful approach to nutrition based on human dignity and food-system thinking.

Food security, as we understand it today, was first defined at the World Food Summit in 1996. It is said to exist “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit 1996). Food security is defined as having four dimensions – food availability, food access, utilization and stability – all necessary to the achievement of food security (FAO 2008). ‘Availability’ refers to the supply side, or existence of sufficient quantities of food through domestic production, imports or food aid, while ‘accessibility’ relates to the ability of individuals to procure adequate resources to acquire food (economic accessibility), as well to the removal of any obstacles they may encounter in accessing food (physical accessibility) (FAO 2008). ‘Utilization’ refers to the nutritional aspects of food, including “the way the body makes the most of various nutrients in food”, diversity of diets, food preparation and intra-household distribution of food (FAO 2008). ‘Stability’ of food addresses whether individuals have access to food on a consistent basis and what factors (adverse weather conditions, political instability, etc) might affect this (FAO 2008).

The status of global food and nutrition security is measured by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the World Food Programme (WFP) and a number of other agencies, through the collection of data on a number of indicators (FAO et al 2017). Broadly speaking, food security can be considered an outcome rather than a process – one that can be measured and quantified at a specific time.

In contrast, the Right to Food is a universal human right, recognized in numerous international legal instruments, including the Universal Declaration of Human Rights.⁵ Under

international law, the Right to Food is the right to “feed oneself in dignity” (Office of the United Nations High Commissioner for Human Rights (OHCHR) 2010) and is realized “when every man, woman and child, alone or in community with others, have physical and economic access at all times to adequate food or the means for its procurement” (UN Committee on Economic, Social and Cultural Rights (CESCR) 1999, para. 6).⁶

The Right to Food is not the right to be fed, but rather the right to “an enabling environment in which people can use their full potential to produce or procure adequate food for themselves and their families” (OHCHR 2010). The Right to Food ensures access at all times to “culturally acceptable food that is produced and consumed sustainably, preserving access to food for future generations” (CESCR 1999, para. 7).⁷

The Right to Food has four main components. Like the definition of food security, food has to be both available and accessible. ‘Availability’ refers to the possibility of feeding oneself directly from “productive land or natural resources” and from “well-functioning distribution, processing and market systems” (CESCR 1999, para. 12).⁸ ‘Accessibility’ encompasses both economic accessibility (that individuals and households can afford food and other basic needs) and physical accessibility (that individuals and households, no matter the physical challenges, can access food) (CESCR 1999, para. 13).⁹

The third element of the Right to Food, ‘adequacy’, differs significantly from the ‘utilization’ dimension of food security. Most fundamentally, the concept of adequacy allows for many ways to attain adequate food – indeed, there is no single determination of adequacy, as it is “to

⁵ Other international instruments include: International Covenant on Economic, Social and Cultural Rights, Art. 11, 16 December 1966, 993 UNTS 3 (1996); Convention on the Rights of the Child, Art. 24, 20 November 1989, 1577 UNTS 3; Convention on the Elimination of All Forms of Discrimination against Women, Art. 12, 18 December 1979, 1249 UNTS 13; Convention on the Rights of Persons with Disabilities, Art. 28,

13 December 2006, 2515 UNTS 3; African Charter on Human and People’s Rights, Arts. 16, 22 and 24, 27 June 1981, 21 ILM 58; African Charter on the Rights and Welfare of the Child, Organisation of African Unity (OAU) Document CAB/LEG/24.9/49, Art. 14 (1990), entered into force 29 November 1999; American Convention on Human Rights, Art. 26, 22 November 1969, 1144 UNTS 144 (1969).

⁶ The Right to Food is defined by the Committee on Economic, Social and Cultural Rights (CESCR) in General Comment No. 12, The Right to Adequate Food (CESCR 1999).

⁷ Paragraph 7, *ibid.*

⁸ Paragraph 12, *ibid.*

⁹ Paragraph 13, *ibid.*

a large extent determined by prevailing social, economic, cultural, climatic, ecological and other conditions” (CESCR 1999, para. 7).¹⁰ Unlike the ‘utilization’ dimension of food security, ‘adequacy’ cannot “be interpreted in a narrow or restrictive sense which equates it with a minimum package of calories, proteins and other specific nutrients” (CESCR 1999, para. 6).¹¹ It implies a diet including the diverse nutrients required for physical and mental growth, development and maintenance at different stages of life, while taking into account “perceived nonnutrient-based values attached to food and food consumption”, such as cultural preference (CESCR 1999, paras. 9 and 11).¹²

‘Sustainability’ is often cited as the fourth core element of the Right to Food and it is also considerably different to the ‘stability’ dimension of food security. As well as steady access to available food, the CESCR defines sustainable production, consumption and diets as intrinsically linked to adequate and nutritious diets.¹³ Consequently, meeting nutritional needs today is not enough to uphold the Right to Food. Rather, nutritional needs must be met for both present and future generations by ensuring the sustainability of the food system and diets.

Furthermore, the Right to Food places legal obligations on countries. First, nations must respect the Right to Food, meaning they must not engage in activities that hinder the ability of people and communities to meet their food needs (CESCR 1999, para. 15).¹⁴ This could include reviewing legislation and policy to ensure they do not have negative impacts on nutritional outcomes or conducting

human rights assessments before allocating resources and engaging in development projects. Second, states must protect the Right to Food, meaning that they must ensure that third parties, including corporations, do not engage in activities that hinder the ability of people and communities to meet their own food needs (CESCR 1999, para. 15).¹⁵ In the context of nutrition, efforts to protect the Right to Food could include living-wage legislation (to ensure access to food), environmental regulations on industrial agricultural (to ensure sustainability and health of the food system) and labelling initiatives (to ensure health and nutrition information is displayed on products).

Third, states must *fulfil* the Right to Food, meaning they must both “pro-actively engage in activities intended to strengthen people’s access to and utilization of resources and means to ensure their livelihood” and provide food or means for purchasing food whenever “an individual or a group is unable, for reasons beyond their control, to enjoy the right to adequate food” (CESCR 1999, para. 15).¹⁶ This could include support programmes or subsidies for farmers to grow nutritious food, fruit and vegetable consumption-incentive programmes, or social-protection schemes to address nutrition insecurity. Fourth, the Right to Food places a number of procedural requirements on states, including the obligation to engage in participatory governance, to focus on the most marginalized and to ensure the rule of law, transparency, accountability and non-discrimination in policymaking with regard to the Right to Food and nutrition.

In addition, ensuring the Right to Food, unlike food security, has direct policy implications. States are to progressively realize the Right to Food, meaning that although they have a core obligation to ensure that no one goes hungry, they must also continually strive towards better fulfilment of the Right to Food and improved nutritional outcomes (CESCR, 1999, para. 16).¹⁷ States are to put their maximum available resources into Right to Food realization (CESCR 1999, para. 17).¹⁸

¹⁰ Paragraph 7, *ibid.*

¹¹ *Ibid.*

¹² Paragraphs 9 and 11, *ibid.*

¹³ Olivier De Schutter defines sustainable diets as “diets with low environmental impacts which contribute to food and nutrition security and the healthy life for present and future generations. Sustainable diets 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” (De Schutter 2011).

¹⁴ Paragraph 15 of *General Comment No. 12, The Right to Adequate Food* (CESCR 1999).

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Paragraph 16, *ibid.*

¹⁸ Paragraph 17, *ibid.*

While realizing the Right to Food requires different actions in different countries, states are to consider adopting national strategies “to ensure food and nutrition security for all, based on human rights principles that define the objectives, and the formulation of policies and corresponding benchmarks” (CESCR, 1999, para. 21)¹⁹ and framework legislation with targets and goals, institutional responsibility, avenues for participation and mechanisms for monitoring and accountability, including recourse procedures (CESCR 1999, para. 29).²⁰

To assist nations in implementing these strategies and legal frameworks, the Member States of the FAO negotiated and unanimously adopted the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (the Right to Food Guidelines) in 2004, which provide concrete policy recommendations, including in the area of nutrition (FAO 2004).²¹

Thus, the Right to Food is not just an outcome, but a set of processes and government obligations rooted in specific understandings of food-system governance and respect for human dignity and diversity.

NATIONAL IMPLEMENTATION OF THE RIGHT TO FOOD

While the Right to Food may seem elusive, over the past two decades, significant progress has been made at recognizing the right to food at the national level. Countries around the globe have recognized the Right to Food through constitutional reform, the adoption of legislation or policy, and judicial rulings. In this section, we briefly highlight some of the advances in each category to show how states might use the law and/or government policy to reduce malnutrition. It should be noted that recognizing the Right to Food is, of course, not the same as realizing the Right to Food and that the examples here focus more on recognition than realization.²² Even so, they illustrate important steps in using

national law and policy as part of a rights-based approach to achieving better nutritional outcomes.

Constitutional recognition enshrines the Right to Food as a guiding principle for state action. Depending on the legal system, constitutional recognition can set domestic policy commitments, require certain measures on the part of the state and limit other actions. Constitutionally protected rights can, again depending on the jurisdiction, provide a cause of action for individuals to challenge violations of the Right to Food at the hands of the state. In 1996, South Africa became the first country to enshrine the Right to Food in its post-apartheid constitution (De Schutter 2013). In the years since, around 30 countries have adopted laws protecting the Right to Food into their constitutions.²³ Among the most recent to do so is Nepal, which enshrined its citizens’ Right to Food in its 2015 constitution: “every citizen shall have” the Right to Food and “every citizen shall have the right to food sovereignty in accordance with law” (Constitution of Nepal 2015).²⁴

Legislative and policy recognition of the Right to Food allows for a more systematic and detailed recognition of the Right to Food than constitutional protection. Both facilitate coordination between different areas of government (for example, the ministries of health, agriculture and social protection) in assigning responsibility and allocating resources. Legislation provides the additional benefit of recognition in law, enforceability clauses and the provision of legal rights. Policies can help in establishing multi-year action plans and connecting long-term and short-term goals, but do not provide legal protection for the Right to Food (De Schutter 2013; Lambek and Claeys 2016).

¹⁹ Paragraph 21, *ibid.*

²⁰ Paragraph 29, *ibid.*

²¹ The Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security (known as the Right to Food Guidelines) were negotiated by the FAO and adopted unanimously by all 187 Member States in 2004. The Guidelines are a foundational text on implementing the Right to Food, in that they interpret how governments can translate the core content and corresponding state obligations elucidated in [General Comment No. 12: The Right to Adequate Food](#) into concrete policies at the national level. It is further foundational in that it was negotiated by the Member States and unanimously adopted.

²² The Right to Food remains one of, if not the most, violated human right globally (Lambek and Claeys 2016).

²³ Countries with constitutional recognition of the Right to Food include Kenya, Bolivia, Ecuador, Mexico and Brazil. Pakistan recognizes the state’s obligation to fulfill the Right to Food in its constitution. Certain states also recognize indirectly the Right to Food in their constitutions, as a part of the right to an adequate standard of living (Sri Lanka), as part of the right to minimum conditions of life (Switzerland), or as an aspirational goal (Uganda). For more, see Lambek and Claeys (2016).

²⁴ For more detail on the Right to Food in Nepal’s constitution, please see: <http://www.fao.org/news/story/en/item/334895/icode/>.

Latin American countries have been the most enthusiastic adopters of legislation on the Right to Food, with Argentina, Brazil, Ecuador, Guatemala, Honduras, Mexico, Nicaragua and Venezuela implementing food and nutrition laws containing some rights-based elements (De Schutter 2012a; Civil Society Mechanism and Global Network for the Right to Food and Nutrition 2014). Elsewhere, legislation containing elements of the Right to Food has been adopted in countries including Indonesia, India and Tanzania (specifically Zanzibar) (Lambek and Claeys 2016).

Brazil has often been cited as the leading example of how to adopt a national strategy aimed at addressing food insecurity from a rights-based perspective. In the 2000s, the country instituted more than 50 initiatives (including a cash transfer programme, a school feeding programme and support for income-generating initiatives), with the involvement of multiple ministries and participatory processes (Rocha 2009; De Schutter 2009, para. 14). Despite weaknesses in a number of areas, the strategy was successful at reducing hunger (Lambek and Claeys 2016). Data and research are still needed on whether and to what extent the recent popular backlash against social programmes in Brazil has affected the country's rights-based approach to addressing food insecurity and the positive outcomes previously achieved.

Where legal or constitutional protection exists, the courts can play an important role in advancing the Right to Food by holding governments accountable and providing redress to individuals and communities for violations (Lambek and Debucquois 2014). In recent years, various courts have made judicial pronouncements on the Right to Food, effectively defining the scope and substance of the Right to Food in certain jurisdictions, as well as corresponding reparations for violations.

Among the most notable is *People's Union for Civil Liberties Vs. Union of India and Others*, initiated in 2001 in response to the government of India's failure to prevent hunger and starvation-related deaths in a time of surplus and in violation of existing law (Lambek and Claeys 2016). In a

series of interim decisions, the Supreme Court of India expanded the scope and reach of the case to include larger systemic issues of food insecurity in the country. The Court recognized a constitutional Right to Food, stemming from the right to life, and identified several programmes as legal entitlements. It further provided directives for the creation of new programmes, established new accountability mechanisms and set the legislature to drafting what would become the National Food Security Act,²⁵ adopted by Congress in 2013 (Lambek and Claeys 2016; Lambek and Debucquois 2014).

HOW THE RIGHT TO FOOD CAN HELP COMBAT MALNUTRITION

When recognized and realized, the Right to Food is a powerful tool to inform immediate, long-term and systemic responses to malnutrition. This section outlines five key ways in which the Right to Food can help to counter malnutrition in all its forms. Together, they could prove transformational for food-system governance and for addressing the immediate and long-term impacts as well as the structural causes of malnutrition.

First, the Right to Food sets out a holistic and adaptable approach to nutrition that underscores human dignity and autonomy. Determining what constitutes adequate nutrition is dependent on prevailing social, economic, cultural, climatic, ecological and other conditions rather than a minimum package of calories, proteins and other specific nutrients. Therefore, the right to food requires policy responses to all forms of malnutrition that take these various conditions into account.

For example, introducing a requirement to assess adequacy as a component of the Right to Food would have major implications for how food aid is provided: countries and organizations like the World Food Programme would have to ensure that food aid is administered in a manner that respected food not just as a set of nutrients, but also a deeply cultural and spiritual matter.²⁶ Distributing a food product that contains the nutrients essential to survival, but which is not in line with local diets, tastes,

²⁵ India, National Food Security Act (NFSA) (2013).

²⁶ In this regard, the *Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights* provide direction on the obligations of states as they engage in foreign aid and other actions which may have implications beyond their borders on the Right to Food (De Schutter et al 2012).

customs or beliefs, would, therefore, not tally with a Right to Food-based response to malnutrition, particularly not a sustained response, even though it might address the issue of food security.

Similarly, food aid within the rubric of the Right to Food would support local producers, rather than flood local markets with cheap food produced elsewhere, to ensure the long-term sustainability of the local food system. Conceiving of nutrition in the context of the Right to Food would also have implications for the design of social-protection schemes, support for agricultural production and health policy. By respecting autonomy, the connection between food and culture, and the diversity of diets that can meet nutritional needs, a rights-based approach to nutrition policy would not only be rooted in human dignity, but would also be effective in ensuring better nutritional outcomes.

Second, the Right to Food addresses the underlying causes of malnutrition by prompting policymakers to look at how people meet their food needs and encourages them to develop policies and legislative frameworks in this vein, rather than just short-term or quick-fix solutions to malnutrition. The most food-insecure people globally today – and, consequently, the majority of the undernourished – are small-scale producers in the Global South, producing for subsistence and/or local markets (UN Committee on World Food Security (CFS) 2009).²⁷ Looking at global malnutrition through a Right to Food lens would lead to policymaking with a focus on supporting small-scale producers and increasing their income by addressing access to markets, access to productive resources (water, seeds, land, etc.) and so on, through participatory policy-making.²⁸

More broadly however, whether addressing undernutrition, over-nutrition or micronutrient deficiencies, the Right to Food is also deeply concerned with discrimination and its impact on malnutrition. States are required to address discriminatory laws and policies and the discriminatory impacts of laws and policies, as well as to pay special attention to marginalized groups. By tackling marginalization and discriminatory practices, the Right to Food further addresses the structural causes of food insecurity in a long-term and systemic manner.

²⁷ The deeper structural causes of this food insecurity include “inequities in the rules governing international trade, ill-advised economic reforms imposed by international financial institutions, financial speculation on global commodity markets, biofuels policy, and the dominance of transnational corporations in global food markets” as well as a deep history of discriminatory policies and underinvestment in rural areas (Gonzalez 2014).

²⁸ While the Right to Food is generally focused on improving income and addressing poverty as a means of achieving the realization of the Right to Food, it also recognizes the rights of individuals to produce food for their own consumption (CESCR 1999, *General Comment No. 12: The Right to Food*, para. 15).

Third, the Right to Food takes a whole-system approach to combatting malnutrition. The policy implications that flow from the Right to Food are aimed at creating an enabling environment that ensures individuals and communities have adequate diets today and in the future. Rather than just focusing on remedies for current food insecurity, the Right to Food spans governance of the entire food system, with wide-reaching implications for responses to malnutrition.

This whole-system approach is most evident in the wide breadth of policy recommendations in the Right to Food Guidelines, which span inter alia economic development policies, labour, land, water, genetic resources for food and agriculture, food safety and consumer protection, education, safety nets, natural and human-made disasters, and international food aid (FAO 2004).

On nutrition, the Guidelines indicate that states should take measures to strengthen dietary diversity, healthy eating and food preparation habits to “eradicate any kind of discriminatory practices”, including at the household level, and to “take into account individuals’ practices, customs and traditions on matters related to food” (FAO 2004). It is also recommended that Member States take policy measures related to information and labelling to prevent overconsumption and unbalanced diets, promoting gardens at home and at school as a “key element in combating micronutrient deficiencies”, fortifying foods, and encouraging breastfeeding, as well as engaging in inter-sectoral collaborations in the areas of health, education and sanitary infrastructure (FAO 2004).

Though not adequately captured in the Guidelines, the deep focus on sustainability at the heart of the Right to Food also leads to a whole-system approach, as sustainable practices involve all stages of the food system, from production practices to processing, transport, consumption, waste management and dietary choices. This holistic approach ensures that nutrition and the Right to Food span all levels and areas of policymaking and encourages collaboration and policy coherence across the food system.

Fourth, the Right to Food is rooted in national obligations and associated accountability mechanisms. As a human right, the Right to Food distinguishes between rights-holders (individuals) and duty-bearers (the state), with the duty-bearer holding obligations towards the rights-holders. The obligations of states not only mean that countries are required to act in certain ways to support nutrition and adequate food, and are restricted from acting in others, but that they move away from charity as a response to food and nutrition insecurity towards the entitlement of individuals and communities. Entitlements, protected in legal and institutional frameworks, offer legally binding and enforceable rights and help ensure the consistent provision of services, even if political change occurs (De Schutter 2012b).

The obligations of states require that recourse mechanisms and remedies exist to ensure that individuals and communities can hold governments to account where they fail to meet their obligations and rights are violated. The Committee on Economic, Social and Cultural Rights (CESCR) states that, “Any person or group who is a victim of a violation of the right to adequate food should have access to effective judicial or other appropriate remedies at both national and international levels. All victims of such violations are entitled to adequate reparation, which may take the form of restitution, compensation, satisfaction or guarantees of non-repetition” (CESCR 1999, para. 32).²⁹ In this way, rights-based approaches turn beneficiaries and others into rights-holders who can file claims before independent bodies to hold duty-bearers accountable.

There are numerous examples of individuals and communities using courts as recourse mechanisms to address rights violations and seek remedy.³⁰ For example, in Guatemala a case was brought in 2011 after five children in two villages were left malnourished as a result of the state’s failure to fulfil the Right to Food and provide needed support. In July 2013, the court, basing its ruling on the Food and Nutrition Security Law and obligations under the International Covenant on Economic, Social and Cultural Rights (ICESCR), ordered 10 government

institutions to take over 20 measures to address violations, including measures in the areas of food assistance, land distribution and agricultural training (Lambek and Debuquouis 2014; FIAN 2013; De Schutter 2013). While there have been challenges in enforcing the ruling, the decision still informs the scope and substance of state duties with regard to the Right to Food and nutrition in Guatemala.

In addition to direct-accountability mechanisms, Right to Food implementation needs to be monitored (CESCR 1999, para. 31).³¹ The CFS is currently monitoring national implementation of the Right to Food. A review of the global monitoring of the implementation of the Right to Food Guidelines and related activities will take place at the 45th session of the CFS in October 2018. Countries have been asked to conduct national monitoring events to assess the degree of adoption of the Right to Food Guidelines³² and the CFS will produce a report with the results of the assessments, as well as other monitoring initiatives.³³ Civil-society groups, social movements and non-governmental organizations active at the CFS will also produce their own report assessing national implementation of the Guidelines, focusing on violations of the Right to Food and providing an updated normative framework of the Right to Food under international law, to shed light on advances in Right to Food thinking in the 14 years since the adoption of the Guidelines. While Right to Food realization has been slow over the past decade and limited progress has been made on implementing the Guidelines, monitoring is still important, so that successes and failures can be tracked and governments can be held to their commitments.

Accountability and monitoring ensure that the realization of the Right to Food and better nutrition are not just empty promises, but ongoing government commitments. They also guarantee that rights are not violated with impunity and that remedies are available to individuals and communities. This way, policies aimed at improving nutrition meet their intended goals and can have a real impact.

Fifth, the Right to Food and the rights-based approach

29 Paragraph 32 of *General Comment No. 12, The Right to Adequate Food* (CESCR 1999). Accountability mechanisms can also include ombuds-people, national human rights institutions or commissions, and independent government agents tasked with monitoring national implementation and rights violations.

30 Other examples include: (1) a decision by the Supreme Court of Nepal to address the immediate need of several communities not being reached by existing food distribution (the claim proceeded inter alia on the grounds that Nepal had obligations to fulfil the Right to Food stemming from international law) (*Pro Public Vs. Government of Nepal* 2010) and (2) a decision of the Sectional Court of Appeal in San Pedro Sula, Honduras, enforcing the state’s obligation to protect the Right to Food by granting a constitutional remedy to prevent the eviction of a peasant group that relied on the land for subsistence agriculture (the Court referred to state obligations under the ICESCR to protect the Right to Food (De Schutter 2013; Lambek and Debuquouis 2014).

31 Paragraph 31 of *General Comment No. 12, The Right to Adequate Food* (CESCR 1999).

32 National implementation of the Guidelines was adopted into the mandate of the CFS when it reformed in 2009 following the global food-price crises (Duncan 2015; CFS 2009).

33 A less direct attempt at monitoring was also conducted on the 10-year anniversary of the Guidelines, with both the CFS and civil-society groups preparing reports assessing the successes and failures of the last decade (Civil Society Mechanism and Global Network for the Right to Food and Nutrition 2014; FAO 2014).

more broadly are deeply rooted in a participatory ethos. Communities and individuals are encouraged to actively and meaningfully participate in the design, implementation and monitoring of any initiatives that impact how they feed themselves or their families. This participatory requirement is of particular importance in the area of nutrition where the corporate influence on policymaking fora remains a reality and where corporations may have conflicts of interest in the policy outputs of government, in that they have much to gain from programmes that seek to address malnutrition through fortification, genetic modification or the purchase of their products.

Rights-based policymaking recognizes that while multiple parties may be stakeholders in a decision, the rights of those most affected (namely, the rights holders, or the human beings in affected communities) and the weight of their voices are superior to those of a corporation or any third parties whose Right to Food is not impacted. Though they do not pose an outright challenge to multi-stakeholder platforms, rights-based approaches elevate the voices of impacted communities and individuals and ensure their inclusion in policymaking. Participatory processes ensure that policymaking responds directly to lived experience and that respect for human dignity and democracy is its heart. This, in turn, “improves the quality of the programmes, it strengthens their legitimacy, and it reduces the risk of under-inclusion” (De Schutter 2012b).

CONCLUSION

The urgent need to address the ‘triple burden’ of global malnutrition is matched only by the challenge of doing so.

In a basket of policy options, the Right to Food can make a critical contribution to addressing both the immediate and long-term effects and the systemic causes of malnutrition and food insecurity in a manner that is rooted in human dignity and sustainability.

While the Right to Food is not a panacea in and of itself, through constitutional recognition and national framework laws or policies that adopt a rights-based approach, as well as political will and participatory governance structures that take into account the lived experience and views of impacted communities, states can take concrete steps towards a world free from hunger and malnutrition.

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IFAD/GMB AKASH

Speakers' Corner

Zero hunger will only be possible with gender equality

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The adoption of Agenda 2030¹ and the Sustainable Development Goals² has put the spotlight on global commitments and efforts to end hunger and achieve food security for all. Yet, with 11% of the world's population undernourished, there is a serious risk of not reaching this target by 2030 (ECOSOC 2015). A deeper look reveals that in nearly two-thirds of countries, women are more likely than men to report food insecurity. Gender discrimination often means women and girls may be first to eat less when food becomes scarce (UN Women 2018). Meanwhile, a third of women of reproductive age worldwide suffer from anaemia, threatening their own health and their children's nutrition and health (ECOSOC 2018). These dismal figures support the assertion that hunger has a woman's face.

These issues did not escape the attention of the 62nd session of the United Nations Commission on the Status of Women (CSW), the largest annual gathering of governments, non-governmental organizations (NGOs), private-sector leaders, United Nations partners and activists on gender equality, which last March considered the empowerment of rural women and girls as its main theme. The outcome of the two-week deliberations, known as the Agreed Conclusions, adopted by Member States, included a strong component related to food security. The document strongly reaffirmed rural women and girls' right to food and nutrition, whilst recognizing their crucial contributions to local and national economies and to the achievement of food security and improved nutrition, in particular in poor and vulnerable households (UN Commission on the Status of Women (CSW) 2018).

Member States expressed deep concern over the fact that women are disproportionately affected by hunger

and food insecurity, partly because of gender inequality and discrimination, despite their significant contribution to worldwide food production. They further voice concern over short and long-term responses to food insecurity, malnutrition, excessive price volatility and food crises in developing countries (UN CSW 2018).

Despite their increased vulnerability to food insecurity and hunger, women account for about 43% of the agricultural labour force in developing countries (SOFA and Doss 2011). Furthermore, women farmers are at the forefront of coping with the impacts of climate change, natural disasters and post-conflict situations. When alternative sources of food and income need to be found, for example, during droughts, floods and other extreme or chronic weather events, the burden of additional work often falls on women and further adds to their unpaid care burdens.

Yet, even though they are the main producers of food in many developing countries and even though almost one-third of employed women globally work in agriculture, including forestry and fishing (ECOSOC 2018), women continue to have less access to land than men across all regions. Only in 37% of the 161 countries analyzed in the OECD's 2014 Social Institutions and Gender Index (SIGI) did women and men have equal rights to own, use and control land (OECD 2014).

Insecure land tenure is directly linked to other barriers, such as lack of civil registration, lack of collateral and poor security in conflict-prone areas, which in turn jeopardize women's access to other productive resources. As a result, women face restricted access to energy, water, pasture, forests, agricultural inputs, credit and savings, agricultural extension services, information, technology and markets, limiting their rights, potential and wellbeing (UN Women 2015).

¹ <https://sustainabledevelopment.un.org/post2015/transformingourworld>.

² <https://sustainabledevelopment.un.org/?menu=1300>.

Women's lack of land-tenure security is historically related to inadequate or discriminatory legal and policy frameworks and social and cultural norms, such as male preference in inheritance, male privilege in marriage and so-called secondary land rights through male family members (Namubiru-Mwaura 2014). Even when the law guarantees women and men the same rights to own, use and control land, customary, traditional and religious practices discriminate against women and undermine the full implementation of national legal codes: this is the case in the majority of countries in the OECD Social Institutions and Gender Index (SIGI) database.

Most agricultural policies and investments still fail to consider differences in the resources available to men and women, their roles, labour burdens and the constraints they face, as well as how these gender differences might be relevant to proposed interventions. It is often assumed that interventions to facilitate access to finance, technology or markets will have the same impact on men and women, but a growing body of evidence suggests that they probably will not.

The resulting gender gap in agriculture can be reduced and the climate resilience of women farmers increased through decisive and informed public and private investment and intervention. The World Bank estimates that closing the gap could lead to a 20-30% increase in yields for women-run farms and a 2.5-4% increase in total agricultural production in developing countries (Namubiru-Mwaura 2014).

FAO figures indicate that if women had the same access to productive resources as men, this could increase agricultural output in developing countries by up to 4%, with the potential to lift 150 million people out of hunger globally (FAO 2011). Beyond improving yield, increasing the productivity of women farmers could improve food security, education and healthcare, as women tend to reinvest in their households.

Taking these factors into account, ensuring that more rural women secure access to and control over productive resources and engage in sustainable agriculture to increase their income security, work conditions and resilience to climate change is one of the pillars of UN Women's efforts

to promote women's economic empowerment.³ Corporately, it is also understood as one of the ways to make progress on all 17 Sustainable Development Goals.

It is clear that empowering women farmers is an effective way to combat poverty and food insecurity, enabling them to educate their children and contribute to peace in their communities. In countries like Mali and Malawi, UN Women and partners are joining efforts to bridge the agricultural gender gap by facilitating women farmers' access to information and markets and raising awareness of sustainable farming practices.⁴

Furthermore, as part of UN Women's strategy to leverage digital solutions to deliver transformational results for women and girls, innovative platforms are systematically incorporated within programmatic interventions to facilitate and accelerate their implementation and growth. Innovation and ICTs offer expanding opportunities to unlock the business potential of traditionally marginalized and isolated women farmers by providing easy, mobile-enabled access to climate-smart agricultural information and services, building a digital track record and credit profile to increase access to finance and connecting farmers to national, regional and global supply chains to improve access to markets (Treinen and Van der Elstraeten 2018).

As part of its efforts to close the gender gap in climate-smart agriculture, UN Women – in partnership with the World Food Programme's Patient Procurement Platform (PPP)⁵ – launched the innovative 'Buy From Women' platform⁶ in 2016. Initially rolled out in Rwanda, this digital, mobile-enabled platform connects smallholder farmers to the agricultural supply and value chain, giving them critical information on weather, market prices and upcoming opportunities via text message. This information improves farmers' capacity to produce marketable surpluses, provide real-time financial information and increase market access, especially for women farmers, who traditionally have not been involved in all parts of the agricultural value chain. The programme also provides training for farmers on gender equality, to further strengthen efforts to bridge the gender gap in agriculture and ensure women's equal participation in all areas of the value chain, including in frontline negotiations and decision-making (UN Women 2017).

³ <http://www.unwomen.org/en/what-we-do/economic-empowerment/rural-women>.

⁴ <http://www.unwomen.org/en/news/stories/2018/3/news-csw62-climate-change-adaptation-strategies>.

⁵ <https://www.wfp.org/news/news-release/wfp-boosts-food-security-connecting-smallholder-farmers-global-markets>.

⁶ <http://africa.unwomen.org/en/news-and-events/stories/2016/07/un-women-launches-the-buy-from-women-innovative-platform-in-rwanda>.

CONCLUSIONS

Ensuring the full exercise of the basic human right to food security and nutrition for women and girls will be critical if the international community plans to make good on its commitment to end hunger and poverty and ensure good health and wellbeing for all, in addition to the other major commitments enshrined in the Sustainable Development Goals, not least climate action. When considering the compounded and intersecting forms of discrimination and exclusion faced by rural women and girls, who are at the forefront of global food-security and climate-change resilience, this becomes even more urgent if we are to ensure that no one is left behind.

Furthermore, closing the gender gap in agriculture by making sure women have equal access to and control over land and all productive resources, and fostering solutions that take full advantage of innovation and technology, will be key to making decisive advances in lifting millions of women, men, girls and boys out of hunger. This is yet another – and, perhaps, the most critical – development goal in which it is evident that progress will remain elusive and limited if women and girls are not fully engaged as beneficiaries and an indispensable part of the solution.

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IFAD/MICHAEL BENANAV

Improving nutrition through a universal approach: Learning about what works

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The establishment of the Sustainable Development Goals (SDGs) means there is now a framework for assessing the universal approach to development.

Universal development is based on an underlying assumption that development challenges are as relevant for the North as for the South, with numerous common and interconnected problems. For many years, development has been driven by a North-South view of how things are done, with those in the South deemed to have the problems and those in the North, the solutions. In this geographic and aid-driven view of the world, the South 'learns' from the North. Over the past decade, however, the approaches of South-South cooperation have also come to prominence.

A recent Bulletin Archive Collection from the Institute of Development Studies (IDS) at Sussex University draws together 10 previously published articles on the topic of universal development, the earliest dating from 1977, when there was widespread questioning of the relevance of development studies to both rich and poor nations. The newly written introduction to the Bulletin (Longhurst 2017) examines the concept of universality in the thematic areas of policy approaches to national and global economic shocks, inequality and exclusion, approaching development problems through greater participation, democratic governance, and global health.

At the same time, the Global Nutrition Report 2017 points (pp. 21-25) to the importance of exploring the relevance of these old categories of 'developed' and 'developing' by identifying interlinkages and the integrated nature of the SDGs. There is robust rationale for this in the universality of human rights – everybody has a human right to adequate nutrition.

Both publications stress the need for culture change. Addressing nutrition issues would appear to be a good opportunity to reinforce mutual learning between North and South, as many countries (both rich and poor) are experiencing the full array of undernutrition and malnutrition problems. The interconnected problems already exist: national institutions need to find new approaches and solutions to them in the face of the myriad nutritional problems emerging in many countries.

Will the SDGs provide a true framework for addressing the issue of universal development for nutrition and other programming matters? Currently, the incentives and the institutions are misaligned, we believe. Mutual learning is important, but so is the 'unlearning' of conventional approaches. New approaches have to be tested – and this is risky in reputational terms – and the traditional silo funding streams to either North or South (even within the same organisation) need to be broken down. There is also the issue of transactional costs. Conventional joint efforts to address shared problems, such as programming partnerships and negotiating joint agreements and conventions (the normal apparatus of global governance), cannot easily address these challenges, as there are still dominant partners.

However, if common approaches to addressing nutrition problems can be identified at the technical and political levels, then those institutions tasked with tackling nutrition can adapt. Identifying areas where mutual learning can progress nutrition could be a vital way for global institutions, such as the United Nations System Standing Committee on Nutrition (UNSCN), to contribute to the fulfilment of the SDGs.

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Questioning the link between income and adequate diets: How to make myth a reality?

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As household incomes increase, nutrition – or, at least, diet – improves, right? After all, food is a basic requirement and logic suggests that food-insecure households will put extra income towards additional food, resulting in better diets. At least, that's the theory. In practice, however, the link is not that straightforward and when higher incomes do lead to better diets, it is most often not right away.

But how do nutritionists help those working in agriculture and economic development to recognize that the link between income and nutrition is not as linear as logic dictates? And equally, how can we help them to learn what programme opportunities exist, and how and when to apply them to boost income and improve diets in food-insecure households?

CHECKING OUR ASSUMPTIONS

Through our work on USAID's multi-sectoral nutrition project – Strengthening, Partnerships, Results, and Innovations in Nutrition Globally (SPRING) – we have been asking ourselves these questions for the past six years and have come up with a few ideas. From the outset, it is important to understand what an adequate diet is and what we know about the link between income and dietary adequacy. Adequate diets meet the caloric, micronutrient and protein requirements necessary for proper growth, development and metabolic function. A

household is food secure when all family members can consume an adequate diet throughout the entire year. The pathways between income and nutrition are complex and non-linear.¹ There are myriad factors at play in complex systems – such as long-standing cultural norms and preferences, proximity to markets, availability of foods in markets and government food policies – that make it difficult to know how and why higher income may or may not result in better diets and nutrition. Therefore, we must question the notion that higher income equals better nutrition.

Increased incomes among rural households do not automatically mean that year-round cash flow improves. Without savings, access to credit, or annual household budgeting, additional income in food-insecure households may translate into improved diets for a few months at best, leaving the most vulnerable family members – children under two years of age and pregnant and lactating women – inadequately nourished for most of the year. We also know that regardless of economic status, rural households often do not know what makes up an adequate diet, or how to achieve one through food purchases and direct food production. Unfortunately, we can't assume that development practitioners working outside of nutrition know what an adequate diet is either, or how development intervention might best support access to the right mix of foods all year round in any given context. Moreover, those who have successfully made linkages between income and nutrition at the household level often do not have the time, staff or funding to document and share what they have learned.

¹ USAID/Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) (2014) *Understanding the Agricultural Income Pathway*. Brief #3. Improving Nutrition through Agriculture Technical Brief Series. SPRING Project: Arlington, VA, US.

COMPETING PRIORITIES

Adequate diets are growing more expensive by the day, with the cost of nutritious food rising and less healthy options frequently remaining the only affordable choice for many families.² Furthermore, the growing costs of basic needs, such as water, energy, education, shelter, seeds and other livelihood inputs require households to make daily decisions that can result in an adequate diet not being their first priority. In addition, an increase in income one year does not guarantee a continued rise in income in subsequent years. Families may, therefore, invest in more nutritious diets only after they are assured that more tangible basic needs are met and that assets that will enable continued income increases have been secured. This delay in improved nutrition is most evident in national indicators, where increases in GDP occur several years before nutrition indicators begin to show signs of improvement. What's more, nutrition improvements do not grow in tandem with economic indicators.³

So, when it comes to how increases in income could help improve nutritional outcomes, how do we get practitioners on the same page? Here are a few recommendations to get us started:

1. Establish a shared vocabulary and simplify communications.

For many years, those involved in the development arena have been very much focused on their own technical sectors, each – from agriculture to nutrition, water, sanitation and hygiene (WASH), health and social protection – having their own language and understanding of terms and indicators. Research with a focus on nutrition outcomes, including the high-level indicator of stunting, may not resonate with economic development experts, for example. Even small variances, for example, using the term 'client' rather than 'beneficiary', can get in the way of practitioners recognizing the relevance of outside evidence to their own work. Ensuring that the nutrition community meets practitioners from different sectors in situ and that evidence and lessons learned are framed in common language will help lay the groundwork for more widespread understanding of how, with the right enabling environment and complementary investments, income may contribute to improvements in nutrition.⁴

2. Build more actionable evidence. Although there is growing evidence of ways in which increased income can lead to improvements in nutrition, more research is needed for action-oriented recommendations.⁵ Measuring household income is difficult, especially within large market-systems development projects, or where there are development investments aimed at increasing the competitiveness of a particular value chain. Even when interventions manage to consistently improve incomes, it is difficult to tie the uses of income directly to changes in nutritional status. However, we must continue to seek answers to the many questions that remain by committing to a rigorous learning agenda and sharing documented results from research that explores how increased income can better contribute to improved diets and nutrition. While randomized control trials remain the gold standard, they are often costly, slow and disruptive to relief or development work. We also need to invest more in rapid-implementation research and prioritize documenting and sharing learnings across sectors. Improving the use of implementation research will also help to inform project design. In this way, activities can quickly adapt approaches and tailor interventions to overcome the barriers people face when it comes to prioritizing additional spending on better nutrition.

3. Increase coordination and collaboration across sectors in development.

Market development or income-generating projects, alone, cannot improve nutrition. Rather, we all must recognize the importance of coordination between sectors and disciplines, so that investments are sequenced purposefully and interventions are layered to address the multiple causes of malnutrition. Given the complexity of the pathway from higher income to better nutrition, projects must be grounded in a well-designed theory of change that acknowledges the wide range of interventions needed to help families apply income to food, health and care.

In the field of nutrition, we spend a lot of time working to change behaviour, so that our clients or beneficiaries will take up and continue to use practices proven to have a positive effect, such as contextually appropriate, climate-smart agriculture, labour-saving technologies to free up women to better care for their families, and household budgeting to help families recognize and mitigate cash shortages that prevent them from maintaining an adequate diet. However, the time has come to apply behavioural change strategies to how we approach our own work. We need to change the way we communicate, research and collaborate to make the myth of increased income leading to better nutrition a reality.

2 Wiggins S, Keats S, Han E, Shimokawa S, Alberto J, Hernández V, Moreira Claro R (2015) *The rising cost of a healthy diet*. Overseas Development Institute (ODI): London. <https://www.odi.org/publications/8877-rising-cost-healthy-diet-changing-relative-prices-foods-high-income-and-emerging-economies#downloads>.

3 Ruel MT, Alderman H, The Maternal and Child Nutrition Study Group (2013). Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *The Lancet*, Volume 382, Issue 9891, 536-551.

4 USAID (2016) *Nutrition-sensitive agriculture: Applying the income pathway*. Technical Guidance Brief. <https://www.usaid.gov/what-we-do/global-health/nutrition/technical-areas/nutrition-sensitive-agriculture-applying-income>.

5 Ruel MT, Quisumbing AR, Balagamwala M (2017) *Nutrition-sensitive agriculture: What have we learned and where do we go from here?* IFPRI Discussion Paper 1681. International Food Policy Research Institute (IFPRI): Washington, DC. <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/131461>.

Motivations for food production

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More than enough food is produced to support everyone on earth, but recent estimates indicate that hunger – understood as widespread chronic undernutrition – affects more than 800 million people (FAO et al 2017). Why?

Many different factors help to explain the persistence of hunger, among them the recent upsurge of famine in armed conflict situations and climate disturbances (FAO et al 2017). Here, however, we explore another explanation: the fact that good nutrition for all is no longer the dominant motivation that drives food production. Centuries ago, most agriculture and fishing were done to feed the primary producers, their families and their local communities. Over time, producers' attention has shifted to the pursuit of wealth. Farmers and fishers sell to distant consumers or food processors, often through intermediaries controlling different segments of long supply chains.

This shift is well illustrated in the histories of some islands. In pre-contact Hawai'i, for example, food was abundant and people were healthy. Taro and other foods were produced to meet people's needs; one can eat only so much taro. However, with the advent of modernity, agriculture and nutrition were separated. Settlers came along and decided to produce rice for profit. There was a large-scale shift from taro to rice production in Hawai'i in the 1860s (Kent 2015a).

The rapid displacement of taro by rice led the local newspaper to ask, "where is our taro to come from?" (Haraguchi 1987). The disconnect between farming for food and farming for money became clear. The people whose taro supply was

threatened were not the people who benefited from rice exports. The Great Māhele, or division of lands, enacted in 1948 allowed non-Hawaiians to own land, opening the way not only for rice, but also for large sugar and pineapple plantations. This move to industrialized agriculture to serve distant customers was driven more by producers' concern for their own wealth than by any desire to contribute to the health of the consumers of their products.

There has been a massive shift toward the industrialization of food systems in much of the world, with local productive resources increasingly used to feed distant others, rather than to meet the nutritional needs of local people. Often, distant others are favoured by food producers because they have more money than local people.

Historically, local pre-modern, non-industrial food systems maintained tight links between agriculture and nutrition. While there has been a trend towards industrialization, the pre-modern systems still function in much of the world where farming is not tied to modern markets (ETC Group 2017). There are serious efforts underway to bring back pre-modern ways.

One approach to doing this is through agroecology, which seeks to replace the economic logic dominant in modern agriculture with an ecological logic. Agroecology evolved to meet the needs of people and the ecosystems in which they were embedded, in sustainable – almost timeless – systems (Anderson et al 2015; De Schutter 2010; IPES-Food 2016; Oakland Institute 2015). These methods are alive and doing well in many parts of the world, but they receive little attention or support from governments. Yet the effectiveness of pre-modern systems for providing good food supplies has been well documented (Inter Pares 2004; Kuhnlein et al 2009).

Agroecology is sometimes understood as the practice of working with nature in farming systems, but a broader understanding would include people and their social organization as part of the ecology. It would recognize that, for ensuring food security for all, community-based social organization of food production might make better sense than industrial modes of organization.

As travel and trade have grown throughout the world, many food producers have become disconnected from their locales. With the encouragement of trade, farmers scan the horizons for the highest bidders for their services. Often, local needs are bypassed. In pre-modern forms of agriculture, there were (and are) close linkages between producers and consumers, but in modern food systems, they are separated – not only by distance, but also by layers of marketers, processors and investors, all of which have their own distinct interests in the food system. While serving the interests of owners and investors in pursuing wealth, many farms, fisheries and food factories operate in ways that exploit their workers, their environment and their customers.

In modern agriculture, most people who buy from the large farms are wholesalers and processors, not the final consumers. Much of the production from modern agriculture goes to factories for transformation into radically different forms (Monteiro et al 2018). Large-scale wholesalers ship the products to the most lucrative markets, as illustrated by the global fish trade (Kent 2003). As the food system is modernized (industrialized), the products are increasingly directed to food processors and people with money, anywhere in the world, rather than to neighbours who just need basic food. The global shift of producers' motivation from producing food for health to producing food for wealth is well documented (Kaufman 2012; Lindgren 2013; Rosenthal 2013; Tudge 2013a and 2013b).

The demand for food has grown much faster than can be explained by population growth. It grows as a result of increasing incomes, especially among people with already high incomes (Kent 2011, pp. 28-40). Many people now consume far more than they need for an active and healthy life. People at all income levels now eat cheap hyper-processed foods rather than the whole or lightly processed foods that would be much better for them (da Costa Louzada et al 2018).

Advocates of large-scale modern agriculture often justify it by claiming economies of scale. However, rather than efficiency in production, the primary advantage of large farms may be that they have one owner profiting from the work of machines and many poorly paid laborers. This is incentive enough for many owners.

Some large farms are profitable because they pursue wealth in unsustainable ways, externalizing many of their social and environmental costs.

That pattern is illustrated by the excessive mining of groundwater in the Midwestern United States (Parker 2016) and by the deforestation in Brazil to satisfy the global demand for soybeans (Richards and Hoelle 2016). There are similar stories about the depletion of the soil in many parts of the world (United Nations Convention to Combat Desertification (UNCCD) (2017). Modern agriculture enterprises often grow through increasing concentration of control and externalizing their costs, not through increasing productivity, efficiency and sustainability (Holt-Giménez 2017; Williams and Holt-Giménez 2017).

Global food agencies ask how agriculture might make a stronger contribution to nutrition, but they should first ask how the two became separated. Why should a project focus on how agriculture investments can be more nutrition sensitive (FAO 2015a), implying that the first requirement is to make a profit for someone beyond the farmer? Why should a project's recommendations be based on the premise that "food systems provide for all people's nutritional needs, while at the same time contributing to economic growth" (FAO 2015b, p. 2). Must all food producers contribute to national economic growth?

The experiences of the US, India and many other countries suggest that economic growth does not necessarily improve the food security of the poor (Chin et al 2017; Thomson 2016). Low-level labourers in farms, fisheries and factories contribute a great deal to economic growth, but get little in return. Despite the great wealth in the world, the dominant food system does not provide for all of people's nutritional needs. The economic benefits flow upward and so does the food. The poor feed the rich (Kent 1982). The preoccupation with the increase in private wealth leads to severe exploitation of people and the environment. It is mainly the rich, not the poor, who benefit from economic growth.

The global agencies should pay more attention to the marketers and processors who come between the primary producers and the ultimate consumers. In the global food system, most of the power lies with these intermediaries. In high-income countries, these intermediaries receive the largest share of the money spent on food. Many of the primary food producers at the beginning of the value chain, working in the fields, on fishing boats and in food factories have such low incomes that they are unable to feed themselves adequately.

How might it be possible to return food systems to the mission of providing good food for everyone? One approach would be to shift to more community-oriented food systems. People in local communities are likely to care about one another's well-being, unlike industrial farmers who never get to know the final consumers of their products.

Karl Polanyi recognized that in so-called primitive cultures it was not money that made the difference:

It is the absence of the threat of individual starvation which makes primitive society, in a sense, more humane than market economy, and at the same time less economic ... [A]s a rule, the individual in primitive society is not threatened by starvation unless the community as a whole is in a like predicament ... destitution is impossible: whosoever needs assistance receives it unquestioningly ... There is no starvation in societies living on the subsistence margin.
(Polanyi 1944, 171-172)

Others put it this way:

When a community functions well, it is because of the active solidarity among its members. People look out for each other, help each other ... When individuals slip into poverty it is not simply because they have run out of money – it is also because their community has failed.
(Dessewfy and Hammer 1995)

Hunger arises when people don't have adequate control over their own life circumstances. Where people go hungry, we can be sure that others are controlling the resources around them and shaping the terms on which they live. The others' priority is serving their own interests, not those of the hungry. People need power, individually and in community with others, to shape their own lives and live in dignity. When people have decent opportunities and can enjoy the full benefits of their own labour, they live adequately. They do that even in harsh physical environments. In well-functioning communities, there is no reason to even suspect that anyone goes hungry (Dregger 2016).

This is not a call for turning back the clock. The task is to imagine, design and implement post-modern food systems – globally, nationally and locally – that draw on the best of both the pre-modern and modern worlds, and avoid their worst features (Kent 1988, 2014, 2015b, 2015c). As long as social systems are dominated by market relationships, hunger and other forms of malnutrition will persist. There is need for much more caring about people's well-being and for a deeper understanding of what caring is and how it works (Kent 2016).

Global and national agencies could facilitate efforts of local people to improve the food systems in their own communities (Kent 1988 and 2014). The connection between food production and nutrition could be restored through community-based initiatives. The need now is for social, not technological, innovation. This work would not be easy, but it would be the right thing to do.

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Letter to the Editor

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Author statement: *The author declared not having any conflict of interest at the time of publishing.*

Dear Sir or Madam,

I read the excellent preamble to your Call for Contributions, which, in my view, was right on the mark in terms of its angle. If I may, I would like to make four points in this regard.

1. It is good that you make the distinction upfront between equity and equality. However, I believe the issue to be a bit more complicated, as detailed below.

EQUALITY

To paraphrase Urban Jonsson, equality is a principle of human rights and is scientifically defined as 'the same'. Equality means that the same rights apply to all citizens. Equality is the right of every individual to receive the same treatment. It is the principle behind all economic, social and cultural rights, the opposite being discrimination, or inequality. Wikipedia defines inequality as "the unequal or discriminatory treatment of an individual by another due to their social or economic status, religion, sex, race, among others". Inequalities are much greater than mere 'differences'. People are essentially equal; differences arise secondarily. Equality results from equity, just as inequality results from inequity.

Reducing social, health and nutrition inequality is hindered by capitalism and the structures specific to it. Inequality is an injustice of access, an exclusion from enjoyment and a disparity in the quality of life, while inequity is the

lack of equity, that is to say, the inherent characteristic of a society that hinders the common good. Inequity is injustice-producing inequality. Inequalities are measured, inequities are judgement based¹. Equality is not a substitute for equity. Doing more for disadvantaged, malnourished people is not the same as addressing inequalities!

Not all inequalities are inequitable and not all equalities equitable – a very important and accurate statement, but not something that is easy to understand. I believe it better to use an outcome/process-development approach to put things in perspective. Take, for example, the use of Affirmative Action to bring about a gender-equal outcome in employment; it can be defined as the use of a morally defensible unequal (or equitable) process to achieve morally desirable gender equality.

A common misconception about 'equality' is the perception that, just because equality can never fully be achieved, it is not a useful concept in development planning and practice. Democracy is equally important, but shares a characteristic with equality -- they represent unachievable goals in practice! Few would claim that we should give up the idea of democracy just because no country has achieved, or is likely to ever achieve, complete democracy (Urban Jonsson).

As poet Jerome Koenig said in a haiku:

*Equality that's
Not defined by human rights
Just another word.*

It is most disturbing that even the UN agencies, which are obligated to use the human rights framework, and maintain that they are doing so, use the terms interchangeably without considering what equality in human rights terms really means. After all, the UN agencies have an obligation to know and understand that equity is not a term used in the human rights language, nor does it have a concrete meaning in human rights terminology. At most, equity is an elusive social goal, which allows governments to offer multitudinous justification when they fall short, whereas equality is a human right and, therefore, a legal obligation. The UN agencies should know that human rights are not discretionary, nor is equality. Equality, as a human right, must be respected, protected and fulfilled by all governments (International Women's Action Rights Watch, IWRAP).

EQUITY

Equity is a justice concept meaning 'fairness', that is, natural justice, as opposed to the letter of the law. By extension, it pertains to the willingness to give to everyone that which they deserve. Equity is a core legal concept and inextricably linked to the notion of justice. As you well put it in your Call for Contributions, "equity is concerned with fairness and social justice and aims to focus on people's needs rather than the provision of services to reach the greatest number of people". In our case, equity in nutrition is a measure of the degree of social justice prevailing in a society. The objective of equity in nutrition is to be seen in the context of a wider search for social justice.

Inequity implies unfair and avoidable differences. A human rights analysis can determine if a given distribution is equitable or otherwise. Achieving equity in nutrition requires social policies of empowerment and a redistribution of social wealth.

But inequity refers not only to injustice in distribution and access, but to processes that generate this injustice. Inequity, therefore, is about how the social structure determines social inequalities. Inequity arises from the appropriation of power and wealth, which leads to discrimination (again, the topic of this issue of UNSCN News).

Furthermore, inequity and inequality have changed as concepts over time, with the expression 'social justice' coming into play more recently. It refers to the search for equilibrium between unequal parties while respecting their differing needs.

Bottom line:

- (a) Equity and equality are not equivalent, nor can they be reduced to simple risk factors, as currently understood by many.¹
- (b) Equity is not even mentioned in the UN Charter or the Universal Declaration of Human Rights. There is no single definition of equity. Any interpretation involves a value judgment (i.e., fair according to whom?) (Urban Jonsson).
- (c) It is not either justice or human rights – it is both! It is not either equity or equality – it is both!

One caveat: Be aware that equality of opportunity is not what we are striving for; we are striving for equality of results!

2. Your Call says: "The Agenda is people centred and prioritizes leaving nobody behind". What I and others would like to know is, what does it really mean to "leave no one behind", as the SDGs proclaim? Communities are not forgetfully left behind! It is the neoliberal policies that systematically exclude them, to quote Rina Warda.
3. As we are talking about the SDGs, are our readers aware that the final document of the Sustainable Development Goals never mentions the right to food and adequate nutrition? It is perhaps the only human right that is not mentioned.²
4. Finally, further down, the Call says: "The proclamation of the Nutrition Decade ... provides a springboard for the realisation of the SDGs". Some of our readers may know that I wrote a somewhat critical piece on the prospects of the Decade in UNSCN News 42.³

1 Correa Botero AM, Arias Valencia MM, Carmona-Fonseca J (2012). Social and health equity and equality: The need for a scientific framework. *Social Medicine*, Vol. 7, No. 1, December 2012. <http://www.socialmedicine.info/index.php/socialmedicine/article/view/639/1260>.

2 Vivero JL, Schuftan C (2016). No right to food and nutrition in the SDGs: mistake or success? *BMJ Global Health*, Vol.1, No.1, June 2016. <http://gh.bmj.com/content/1/1/e000040>.

3 Schuftan C (2017). *As I see the challenges of the UN Decade of Nutrition: Some key points*. UNSCN News 42, June 2017, pp.133-135. Rome: UNSCN.

Awards

Anna Larrey: A global ambassador for better health and nutrition



On 6 June 2018, Dr Anna Larrey, Director for Nutrition at the Food and Agriculture Organization of the United Nations (FAO) and, until recently, President of the International Union of Nutritional Sciences, was awarded an Honorary Doctorate (Honoris Causa) in Science from Montreal's McGill University. On accepting the prestigious degree, Dr Larrey said that her greatest source of pride were the women and children of Ghana, especially those of the Manya Krobo district with whom she has worked to try to tackle malnutrition. She dedicated her award to them and to her mentors for their encouragement and support. "They gave me their shoulders to stand on," she said.

Dr Larrey is best known for her research on maternal and child nutrition, not least her efforts in addressing micronutrient deficiencies and advocating breastfeeding. The overwhelming evidence on the benefits of breastfeeding to health outcomes makes a powerful case for protecting, promoting and supporting this life-saving resource, which ensures the best start in life for newborns. Each year, new data underpin the importance of breastfeeding's role in the survival, growth and development of children, as well as the health and wellbeing of mothers. This evidence is translated into global guidance and leads to the implementation of national policies.

For decades, however, the medical community used standards based on formula-fed babies to assess the growth of all infants. Consequently, paediatricians would advise mothers to supplement their feeding with baby formula, so that children could reach the recommended weight and height for their age. Keen to correct this, Dr Larrey was part of a World Health Organization research consortium that led the development of a new Child Growth Standard based on breast-fed babies.

These standards were published in 2006 and have since been adopted by more than 125 countries. A key lesson of this study is that children anywhere in the world can grow to their full potential with optimal nutrition (breastfed, nutritionally adequate complementary foods), optimal environment (hygiene and sanitation) and optimal health (immunization and adequate care). Dr Larrey led the Ghana portion of the project's work. She and her research colleagues established a nutrition research and training centre in the small, rural town of Asewewa, in Upper Manya Krobo, Ghana, to apply the research findings in addressing the nutritional needs of rural communities.

Dr Lartey was born into a family of six children in Ghana, four of whom were girls. Her parents believed strongly that investing in education was key to enabling her and her sisters to provide for themselves should they encounter marriage difficulties. Dr Lartey went to Canada to pursue a Bachelor of Science degree at the University of Ottawa in the late 1970s, at a time when only a small percentage of African girls of her generation were fortunate enough to overcome traditional stereotypes and get a college education. She subsequently earned a Master of Science degree from the University of Guelph and, later, a Doctorate in International Nutrition from the University of California, Davis.

Throughout her career, Dr Lartey has worked tirelessly to create opportunities for women to advance through higher education, which has so far benefited 17 Ghanaians (10 of whom are women) to obtain their doctoral degrees in universities in United States, Canada and Ghana.

In addition, Dr Lartey became the first African woman to head the International Union of Nutritional Sciences (IUNS), serving as its President from 2013-2017. In this role, and with the support of her Council, she instituted a reorientation grant that helps early-career nutrition scientists from developing countries to start their professions in their home countries.

The nutrition community extends hearty congratulations to Dr Lartey on her much-deserved award and acknowledges with pride the contribution she has made to the health and wellbeing of mothers and babies around the world.

Publications

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NEW ONLINE TRAINING

Accelerating Behavior Change in Nutrition-Sensitive Agriculture from the Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) Project

Ashley Aakesson, SBC Advisor, SPRING

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The Accelerating Behavior Change in Nutrition-Sensitive Agriculture online training is a one- to two-day course for people who design and implement agriculture projects. The course provides participants with knowledge and skills to help agriculture projects become more nutrition-sensitive, maximizing agriculture's contribution to nutrition within family, farm, market, and community systems. Participants practice applying proven behavior change approaches to identify context-appropriate nutrition-sensitive agricultural practices and to focus project resources effectively on increasing their use.

By the end of this training participants will:

- Understand agriculture's role in improving nutrition,
- Use guiding questions to assess which agricultural practices are most likely to contribute to nutrition within the project context,
- Know how to use behavior change methods to engage people, prioritize practices, reduce barriers to improved practices, and create enabling physical and market environments for them, and
- Establish a commitment to developing a behavior change strategy for current or future work.

The interactive course guides participants through narrated slides, quizzes, exercises, handouts, videos, and links to helpful resources. If you have difficulty accessing the course, encounter any problems, or have feedback, please email us at info@spring-nutrition.org (link sends e-mail).

<https://www.spring-nutrition.org/publications/training-materials/accelerating-behavior-change-nutrition-sensitive-agriculture>.



The potential of using a human rights approach to speed up the implementation of comprehensive restrictions on the marketing of unhealthy foods and non-alcoholic beverages to children

Sabrina Ionata Granheim, Stefanie Vandevijvere, Liv Elin Torheim

The aggressive marketing of unhealthy foods and beverages to children has been linked to the obesity epidemic, yet little progress on limiting such practices has been seen at the national level. This paper explores the potential to use the legally binding and non-binding human rights instruments that already exist to speed up the implementation of restrictions on the marketing of unhealthy foods and beverages to children. It argues that the best interests of the child should be considered above all other interests; that the rights to health and adequate food cannot be realized without supportive, healthy environments; that children should be protected from economic exploitation; and that the marketing of unhealthy foods and beverages should be explicitly recognized as a threat to the rights to food and health. It concludes that human rights instruments as they currently stand could be harnessed to advance public health measures to limit the marketing of unhealthy foods to children, and that policymakers and advocates could draw on those instruments to strengthen their efforts to implement marketing restrictions.

Available at: <https://academic.oup.com/heapro/advance-article-abstract/doi/10.1093/heapro/dax100/4791426?redirectedFrom=fulltext>.



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