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The agriculture and health nexus: a decade of paradigm progress but patchy policy actions

In 2019, the Lancet Commission on Obesity published the report "The Global Syndemic of Obesity, Undernutrition and Climate Change".[1] It highlights multiple opportunities for systemic actions aimed at the underlying drivers of obesity, undernutrition and climate change. Many of the potential systemic actions to address the Global Syndemic directly apply to agriculture and their origins can be found in earlier reports such as the 2009 Agriculture at the Crossroads report.

What an enlightening exercise it is to pause and reflect on the evolution of a massively important issue over 10 years. The 2009 Agriculture at the Crossroads report[2] from the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) was a formidable piece of scholarship backed by an extensive global consultation process. It clearly helped to pave the way for new thinking, new trans-disciplinary connections, and new high-level directions for agriculture. The eight themes identified in the report articulated the reach of agriculture's octopus tentacles: bioenergy, biotechnology, climate change, human health, natural resource management, traditional knowledge and gender equity. I will focus mainly on the health and food system links. Having examined these for the 2019 Lancet Commission on Obesity, which I co-chaired, we concluded that the nutrition problems of obesity and undernutrition needed to be seen together with climate change as one entity which we called The Global Syndemic. My overarching sense is that in the past decade we have made considerable strides at the levels of paradigms, concepts, rhetoric, and global commitments but the policy action on the ground has remained patchy and sluggish – far too sluggish for the urgency that the food systems crisis demands.

Think of the global responses to other crises. In 2007-2008, the global financial crisis galvanised world leaders into pouring trillions of dollars into rescue packages,

including bailouts of the private financial institutions who created the crisis in the first place. The 2019-2020 Covid-19 pandemic, galvanised governments and international organizations into creating a coordinated lock down of cities and people movement based on precautionary and preventive principles. The world can collectively implement drastic actions if the threat is acute and the fear level is high.

The food system crisis is slower (decades rather than months) and the fear level is relatively low. This is despite the inexorable rise in obesity in all countries, the inadequate progress in reducing undernutrition in many African and South-East Asian countries, and the existential threats of climate change and environmental damage that our food systems are helping to drive. What has been the political response to the food system crisis? Where is the coordinated rallying of government responses? Where is the sense of threat and urgency? Where are the headlines?

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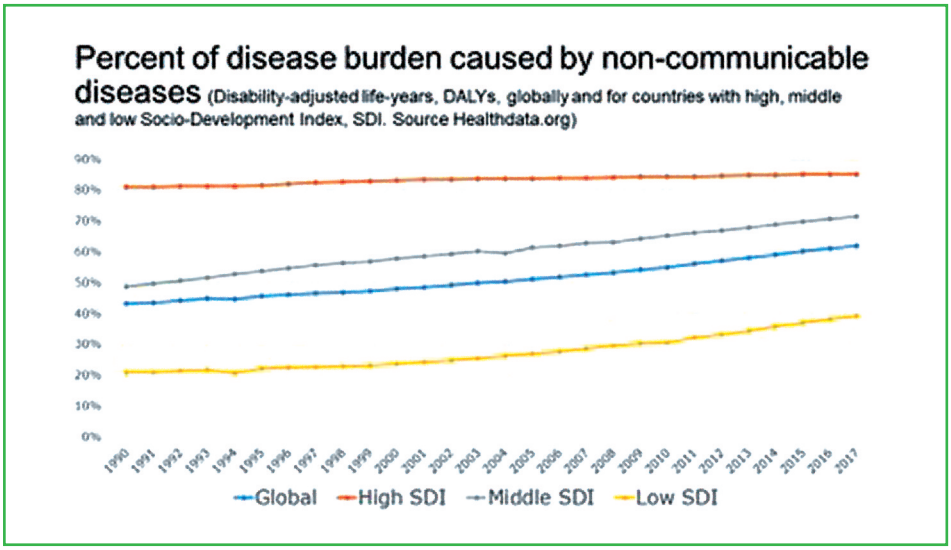
A clue to the weak responses to the food system crisis can be found in the opening pages of the IAASTD report. In the Statement by Governments section, three countries, Australia, Canada and the United States of America, did not approve the final report. They undoubtedly also used their political clout throughout the process to water the report down as much as possible to minimise its impact on business as usual. Business as usual, of course, is that large agricultural sectors in the rich countries use their considerable lobby power over their governments to maintain agricultural policies and subsidies in their commercial favour.

The politics in the last decade have not changed enough amongst the rich countries to support the implementation of the excellent actions proposed in the IAASTD report. In fact, the food industry's market power has become even more concentrated into fewer mega-corporations and their lobbying expertise has become even more sophisticated. At the international level, the US political forces driving their own national and commercial agendas remain a huge barrier to achieving the collective international action needed to address the food systems crisis.

Interestingly, the IAASTD report started with a push from private sector and the World Bank around biotechnology and specifically transgenics. However, the highly-consultative process undertaken with a wider group of stakeholders expanded the agenda to include reducing hunger and supporting sustainable development. This agenda setting occurred in the era of the Millennium Development Goals (MDGs), which did not include non-communicable diseases (NCDs), acknowledged at the time to cause 60% of all deaths, 80% of which were in low and middle income countries (LMICs)[3]. The figure shows how NCDs have risen as a proportion of total disease burden for all countries but especially in LMICs (shown as low and middle Socio-Development Index).



Undernutrition was centre stage and obesity was not even considered in the MDGs. We are now in the era of the Sustainable Development Goals (SDGs) which gives due prominence to the world's dominant health problems of NCDs and wraps undernutrition and obesity together into 'malnutrition in all its forms'. This is great progress towards the holism needed for collective action.

The IAASTD report placed itself clearly in the technical space (agricultural knowledge, science, and technology). We have learnt over the past decade that the technical barriers are far less important and more easily fixed than the political and commercial barriers. Major reports from the UN and international agreements now pay more attention to implementation issues and monitoring and reporting systems for accountability. More attention is also paid to managing conflicts of interest, although this is still far from ideal and commercial vested interests are still very dominant in the development of national food policies and subsidies.

The inclusion of a theme in the IAASTD report on traditional and local knowledge and community-based innovations was very insightful. These other worldviews and bodies of knowledge have much to offer, especially at the local level, but they are consistently undervalued in the search for mega-answers or technology fixes.

If a modern day IAASTD report were to be written, it would undoubtedly update and highlight some of these themes and paradigms that have achieved prominence in the past decade. It might include a focus on the perpetrators (extractive commercial operators who create negative externalities, and corrupt or inept governments who do little about it) as well as the victims (small farmers, children, women, and people living in poverty). It might focus more on in-

equities and the neoliberal economic policies that are creating them. It might be more cautious about public-private partnerships with those industries that are party to the problem. It might highlight even more the systemic view of food and agricultural systems and explicitly champion the shift from considering food as an economic commodity to increase GDP, export earnings, and company profits to food as a common good for human health, ecological health, social equity and economic prosperity for all.

The 2009 IAASTD report was a forerunner of many subsequent reports that bring together the silos of agriculture, health, climate, social equity, and economics. The 2019 Lancet Commission on Obesity report on the Global Syndemic of obesity, undernutrition and climate change was one such report. I had both hopes and fears about joining up three major, unsolved global problems into a single conceptual entity. My hope was that it would allow people see beyond the visible manifestations of obesity, undernutrition and climate change into their common underlying drivers in the food systems, transport systems, land use and urban design. My fear was that it would further heighten people's 'complexity confusion' and disillusionments about getting meaningful action. It turned out my hopes triumphed over my fears. Once it is pointed out, people really see the connectedness between problems, understand the commonalities of their drivers and look for double- or triple-duty actions.

One major paradigm shift in the last decade has been the NOVA classification of foods based on their level of processing.

In 2013, FAO and WHO had a joint meeting called 'Meeting of the minds' which brought health and agriculture together around the table on the theme of 'nutrition-sensitive agricultural policies.' It was surprising to me how far apart the minds were at that meeting – it seemed like health was trying to impose its agenda on a reluctant agriculture which was in turn defending its existing priorities. In retrospect, this jostling about the purposes of agriculture was probably just the process of two huge silos getting to know and trust each other. Since then, the narrative and collaboration has moved much more onto a common agenda of collective food system approaches to the crises of climate change and malnutrition in all its forms. While that narrative has good high-level traction, the power politics still play out on the ground and policy actions on food systems, while heading in the right direction, remain painfully slow. The national legal and economic measures countries are adopting to achieve carbon neutrality tend to leave out agriculture or delay its inclusion. This is partly because of the complexity of accounting for agricultural emissions of methane and nitrous oxide within carbon budgets but it is also because of the lobby power of the agricultural sector and the challenges of creating just transitions for the farmers whose livelihoods are affected.

One major paradigm shift in the last decade has been the NOVA classification of foods based on their level of processing rather than nutrient composition.[4] The categories of unprocessed or minimally processed foods, processed culinary

ingredients (like flour, oil and salt) or processed foods (like cheese and bread which can be made domestically) are not closely associated with health problems. However, the foods defined as ultra-processed food are industrial formulations of multiple food constituents and additives and contain little if any whole foods. It is this group of hyperpalatable foods which tends to contain high levels of salt, sugar and fat and a high consumption of them is related to nutritional health damage – mainly for obesity and NCDs. These foods also exacerbate undernutrition with empty calorie foods, like instant noodles, sugary drinks and processed snacks, displacing more nutritious food. Vast agricultural lands and subsidies are dedicated to the raw materials for ultra-processed foods such as wheat, sugar and corn. The IAASTD report pointed to this problem but in the intervening decade, considerable evidence has accumulated implicating these ultra-processed food products as core drivers of obesity and NCDs.

The options laid out in the IAASTD report for addressing the nutritional burden of NCDs reads like all the subsequent reports on the issue: food systems directed towards quality and diversity of foods rather than quantity and price; multi-sectoral policy responses with a strong emphasis on regulation rather than a reliance on education and individual behavioural change; fiscal measures, such as taxes and subsidies, that align with health; monitoring systems for accountability, and; international agreements on labelling and marketing practices.

Overcoming Policy Inertia

Policy Inertia is the phenomenon of the lack of policy action in the face of a major problem with widely-agreed, well-defined, evidence-based actions for implementation. According to the Global Syndemic report, the three major contributors to Policy Inertia are: 1) Industry opposition to the actions; 2) government unwillingness to tax and regulate (related to 1), and; 3) lack of demand from civil society for policy action.[3] What will be the disruptive force to break this impasse? I see civil society as the 'sleeping giant', which, if aroused, could be the game changer. Civil society actors (NGOs, academics, professional organizations, and the public) typically have passion and commitment by the bucketload but they also have diverse agendas, are poorly coordinated, and lack money. Bloomberg Philanthropies have shown in several countries that an injection of funding for communications, coordination, evaluation and social lobbying can catalyse social changes and generate sufficient demand for action that effective food policies are implemented despite industry opposition and government reluctance. If this general model could be widely applied in various forms in different countries, then we might start seeing the global movement needed to overcome the Policy Inertia that is killing us and our planet. That is my hope and current mission.

The need for a broad approach to food safety is evident in the IAASTD report and this has been underlined by recent events: the probable cancer-causing properties of the commonly used herbicide glyphosate; the threat to fruit and vegetable production from pesticide-induced declines in pollinator populations, and the emerging novel infectious diseases, such as coronavirus, arising from agriculture and food systems. The strong regulatory approach applied to standard food safety practices, such as food handling and storage requirements to prevent foodborne infectious diseases, could be expanded with definitions of food safety which encompass longer-term, population-wide or ecosystem threats from food.

Sustainable, food-based solutions to undernutrition were promoted in the IAASTD report, but this approach seemed to play second fiddle to education strategies and technology solutions, such as biofortification. The shift in thinking over the last decade from programmatic approaches to systemic approaches for nutrition problems is welcome. However, describing nutrition problems and solutions in terms of complex, adaptive systems is a real communications challenge. Governments and non-government funders are much more supportive of scalable feeding or fortification or education programs to patch up the visible problems of starving children and mothers than they are of programs for obesity and diabetes. Indeed only 2.2% of development aid for health is allocated to NCDs, despite NCDs being responsible for two thirds of deaths in LMICs, half of which occur under the age of 60.[3] Funders are also reluctant to shift from the direct funding of less effective education and programmatic responses to funding advocacy for the more effective regulatory and fiscal responses because these involve protracted battles against vested commercial interests.

The strong regulatory approach applied to food safety could be expanded to longer-term, population-wide threats from food.

In the Global Syndemic report, we highlighted multiple opportunities for systemic actions aimed at the underlying drivers of obesity, undernutrition and climate change. Double or triple-duty actions are those that have multiple impacts across the Syndemic with examples being the development of sustainable, healthy dietary guidelines, labelling food with both health and environmental footprint signposts, or restricting the lobbying power of commercial entities on food policy development.[5]

Many of the potential systemic actions to address the Global Syndemic directly apply to agriculture. The most powerful lever for re-orienting any system is to change its underlying purpose and values.[6] For agriculture, the paradigm shift from extractive to restorative agriculture is underway at a high level and in pockets locally. To make a difference globally, this nascent movement will need to reach inside millions of farm gates around the world where small farmers, in particular, are struggling to maintain a livelihood. National policy statements about agriculture as a positive force for human health, ecological health, and social equity as well as economic prosperity would set the directions for policy, regulatory and economic levers to be applied to achieve this outcome.

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Endnotes

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