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Innovative financing for nutrition

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Given the constraints of both overseas development aid and domestic financing for nutrition, innovative financing is critical—yet nutrition lags behind other sectors in catalysing it. Here, we argue that the framing for nutrition must evolve and critical actions must be taken to generate more money for nutrition and more nutrition for money. Food systems hold some of the most powerful opportunities to improve human and planetary health while increasing productivity—and the private sector has a key role to play in this.

In a dysfunctional food system, undernutrition, diet-related non-communicable diseases (NCDs) and climate change are intrinsically linked as three elements of a global syndemic[1]. Disrupting current food systems and incorporating healthy food options into our societies, including our health systems, can improve the state of the planet and human health while simultaneously generating large economic and human capital gains. Yet, among the major challenges of this syndemic, only the climate change agenda has so far got meaningful traction and financing at scale from the global community—with nutrition remaining a relative orphan that gets only modest attention from the public and the private sector.

Innovating financing is a powerful potential tool to shift private sector priorities towards sustainably addressing malnutrition in all its forms. It is not the only solution, but one important tool. For financing to address both undernutrition and NCDs, a recent study[1] makes several recommendations, two of which are relevant for innovative financing: thinking in global 'syndemic' terms (with a focus on common systemic drivers that need common actions, with joint platforms to work collaboratively on common systemic drivers and double- or triple-duty actions); and creating modern sustainable and health-promoting business models (which implies shifting business outcomes from a short-term, profit-only focus to sustainable, profitable models that explicitly include benefits to society and the environment).

Market opportunities

To date, the global community has focused on undernutrition, while the focus on NCDs has been limited to a few policies—primarily for reducing intake of a handful of isolated nutrients (for example, salt and sugar). With rising obesity and NCD rates globally, this approach is insufficient. The modern industrialized food system is predicated on food as an economic commodity to supply calories, rather than as a tool to keep populations healthy and productive, address health disparities, reduce healthcare spending and preserve natural resources. Now, a major market opportunity exists to shift this food system to be nourishing for both people and the planet, addressing policies and programmes to address malnutrition in all its forms (undernutrition and obesity), and highlighting reputational and financial risks for the private sector.

There are long-term reputational and financial risks associated with malnutrition for food sector businesses[2]. These include social pressures and advocacy efforts to hold businesses accountable for their role in public health and global targets such as the Sustainable Development Goals (SDGs)[3,4]; growing regulations such as labelling, taxation and marketing restrictions[5,6]; consumer demand for more authentic, healthier and sustainably produced food[3,7,8]; the notable worker productivity and healthcare spending consequences of poor nutrition on businesses and economies alike[9]; and growth of stakeholder centric business models[10]. The corollary of these risks is the tremendous opportunity they provide for driving financial success through the development and distribution of food products that respond to the global syndemic in an equitable manner.

Financial markets have witnessed burgeoning interest in environmental, social and governance (ESG) investing. ESG investing acknowledges that companies that align their business practices, strategies and governance with planetary and societal well-being are likely to yield financial success and shared value in the long term. The value of global ESG assets tripled from 2012 to 2020 to US$40.5 trillion—nearly half of the global financial assets under management[11].

While metrics and data systems for the environmental and governance components of ESG investing are more widely accepted and implemented, efforts in the social domain—especially as they pertain to health and nutrition—are only nascent[12]. Here, we argue that the ESG investing paradigm presents an additional lever for driving the

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development of a healthier and more equitable food system and tackling the global syndemic.

Economic costs of malnutrition

On average, childhood stunting is estimated to cost low- and middle-income countries 1.2% of their annual gross domestic product (GDP)[13]. While the impact varies by country and region, among the private sector, the cost of childhood stunting generally affects the food, garment and manufacturing sectors the most[13].

The financial burden of diet-related chronic diseases—particularly overweight, diabetes, cancer and cardiovascular disease—results from increased healthcare needs, and losses from absenteeism and lower worker productivity. This should be seen as a 'financial risk' by corporations, as their workforce is less productive and requires higher health insurance premiums. The World Obesity Federation estimates that Organisation for Economic Co-operation and Development countries spend US$455 billion per year in total costs associated with overweight. Obesity-related losses were estimated at about 2.2% of GDP in 2019; without necessary action, these will double to 3.3% of GDP losses by 2060[14]. Cardiovascular diseases were estimated to incur US$318 billion in total medical costs in the United States in 2017; this is projected to more than double by 2035 (US$749 billion). These are probably underestimates of the true costs of diet-related NCDs today, and do not capture the accelerating burdens of diet-related chronic disease in low- and middle-income contexts. Further, all forms of malnutrition have wide-ranging societal costs, as well as human capital and welfare implications.

Financing levers for nutrition

While proven solutions to address child stunting and other forms of malnutrition exist, financing to scale these up is extremely constrained. Estimated nutrition-specific financing needs for select global targets for undernutrition in mothers and children have increased from US$7 billion per year for 2016–2025 to US$10.8 billion per year over 2022–2030[15]. Nutrition-sensitive needs towards the full gamut of SDG 2 targets are estimated at US$ 39–50 billion per year[16]. These estimates do not, however, include needs associated with preventing or treating diet-related chronic diseases, and these need to be met from public, private (including philanthropic) and innovative financing sources.

Public financing for nutrition

Government spending on nutrition in all countries has historically been difficult to track because of a lack of complete and comparable data on nutrition expenditure and spending across diverse sectors. However, from the data currently available, it is clear that increased public investment paired with political will, strong leadership and coordinated implementation is essential to ensure sufficient, sustained financing and achievement of global targets for nutrition.

In 2017, the Investment Framework for Nutrition forecast the additional financing required to meet the 2025 World Health Assembly targets for undernutrition, including the critical and increasing role of domestic resources from country governments to achieve funding goals and associated nutrition outcomes[15]. Financing needs from donors (including philanthropies), domestic budgets and innovative sources were estimated at about US$7 billion annually before the coronavirus disease 2019 (COVID-19) pandemic and about US$11 billion annually after the pandemic—clearly reflecting how it created further competition for limited resources.

A 2021 World Bank report reveals the extent to which lower-income countries are being forced to cut investments in health services, including nutrition, as a result of the pandemic's impact on domestic financing availability[17]. Similarly, another recent report reflects on the effect of COVID-19 on domestic health expenditure, projecting declines of 7.2% in 2020, 4.2% in 2021, 2.2% in 2022 and a domestic financing "downward trend exacerbated by COVID-19, with recovery to pre-pandemic levels expected only towards the end of the decade"[16].

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Even fewer data are available on spending on diet-related NCDs. While direct healthcare spending on diet-related NCDs dominates most nations' healthcare expenditures, corresponding spending by governments to improve nutrition and prevent these costly diseases is relatively unknown. Nations simply do not track, document or collate efforts to improve nutrition to reduce NCDs.

Healthcare system opportunities for nutrition

Programmes and services that recognize and respond to the critical link between nutrition and chronic illness, dubbed 'Food is Medicine' interventions, have received some recent attention in the United States. Food is Medicine interventions aim to address diet-related NCDs and/or undernutrition with the express purpose of addressing health conditions and being incorporated into healthcare systems. These interventions can include, for example, medically tailored meals, medically tailored groceries or produce prescriptions, and fortified foods or nutritional supplements.

However, there are two significant hurdles for the healthcare system to adopt Food is Medicine: a scarcity of robust research establishing which conditions are most responsive to food-based interventions; and regulatory mandates that preclude certain insurers from providing these services to their members. That said, there are emerging initiatives that aim to address these hurdles. For example, a number of Food is Medicine coalitions have been created (https://www.fimcoalition.org), and several major organizations—including the American Heart Association, the National Produce Prescription Collaborative supported by the Rockefeller Foundation, the Aspen Institute's Food is Medicine Initiative[18] and the US National Institutes of Health—are exploring options to support this agenda. There are also a number of start-ups contributing to growing evidence-based links between food and human health. For example, Brightseed has developed a library of health-promoting bioactives and DayTwo has the most extensive database for DNA sequencing of the gut microbiome, which they leverage using artificial intelligence and machine learning to develop personalized nutrition, diagnostics and therapeutic solutions.

The regulatory hurdle is more challenging, but some promising approaches are emerging in the global north, including efforts to support insurance coverage and a Medicare pilot programme in the United States[19].

Nutrition must also become a key component of universal health coverage[20]. An integrated system that supports an infrastructure of food and nutrition intervention providers and access pathways in healthcare can be utilized to immediately begin to advance nutrition security, health and health equity in diverse populations. Integration of food and nutrition interventions into healthcare holds significant promise for advancing nutrition security while also providing a return on investment for public and private stakeholders.

Private sector financing for nutrition

From early stage venture capital and private equity firms through to corporate and institutional funds, financial markets are recognizing the opportunity of investing in the food and wellness space. Yet, the extent to which such investments impact the burden of malnutrition and health inequities globally remains unclear.

Early stage venture funds. In 2021, total venture capital activity reached US$612 billion, 100% more than the year before[21]. Nevertheless, the capital invested into 'sustainability' or purpose-driven tech still represents only a small fraction of the total. Agrifood tech, one important component of sustainability, specifically received approximately US$51 billion in 2021, less than 10% of total venture capital allocation[22].

So far, most private venture capital investment in nutrition has focused on personalized nutrition platforms that focus largely on individual well-being, weight management and metabolic health. Increasing focus has been on the gut microbiome and digestive health, and more platforms are prioritizing convenience and access to healthier foods and meals. However, these investments have primarily been in high-income countries, and have failed to adequately address population health or issues of health equity.

Over the past 12 to 24 months, a growing number of venture capital investors—notably specialized agrifood funds such as Astanor and S2G Ventures—have demonstrated clear strategic interest in investing in wellness, with 'Food is Medicine' becoming a dominant theme, as noted within the healthcare system (https://fnhic.splashthat.com/). Some platforms are addressing the therapeutic potential of foods for specific conditions, paving the way to a healthcare system in which nutrition is placed at the forefront for both treating and preventing disease. Others are focusing on connecting the supply chain and allowing consumers to better understand the nutritional profile of the foods they consume. There is a new wave of alternative protein and plant-based meat companies that, unlike their predecessors, prioritize nutritional content as much as taste and texture.

New investments in accelerating innovations across the food system from large, established agricultural companies, supply chains, retailers, manufacturers and restaurants represents an incredible new wave of opportunity.This is particularly relevant in light of the emergence of large-scale scientific research, new powerful technologies, and shifts in consumer demands and priorities accelerated by the pandemic and the growing appetite from payers to prioritize well-being and prophylactic nutrition-based solutions. Immense quantities of data generated by research can be leveraged by start-ups to create more personalized and impactful products.

The private sector is starting to support regenerative agriculture innovations, as is the case with Tikehau's recent €1 billion regenerative agriculture fund, supported by some of the world's largest food and insurance firms in the world, including Unilever and AXA. Although motivated by returns, the fund has tied 50% of its carried interest to impact performance, with a strong belief that every US$1 invested into regenerative agriculture will generate a minimum of US$7 returns in terms of profitability and social and environmental benefits. The sorely needed paradigm shift in mindset that achieving powerful financial and impact returns are not mutually exclusive is finally starting to happen. Besides being better for the climate, regenerative agriculture can boost the nutritional content of foods[23].

Impact investing. COVID-19 paired with the climate crisis have resulted in a surge of investor interest in impact-focused investing, with US$21.4 trillion in total sustainable investments growing at a compound annual growth rate of 25% (ref. 24). Unfortunately, no evidence exists that these food-related sustainability commitments are crossing over into any meaningful or measurable commitments around nutrition. The key here is to educate investors about the fundamental impact and return potential of investing into nutrition.

Institutional funds. Venture capital interest in nutrition is mirrored at the later stage by the establishment of dedicated nutrition funds such as the BlackRock Nutrition Fund or the Credit Suisse JPMorgan Sustainable Nutrition Fund, aimed at combatting global sustainability challenges in nutrition and addressing ties between nutrition, health, biodiversity and climate, respectively[25,26]. While the launch of these institutional equity funds signals a clear appetite from clients to invest into this space, it is as yet unclear to what extent investors are evaluating the impacts of their investments on human health and nutrition.

Corporate food funds. Large food corporates are responding to growing consumer demand for more authentic products aligned with human and planetary health, offering products that are affordable and tasty but also eco-friendly and nutritious. This shift in priorities is reflected on the balance sheet: 90% of the top 100 consumer-packaged-goods brands are losing market share, while 'clean label' products are growing six times compared with conventional products[27]. Moreover, the large food corporates are becoming increasingly active investors and acquirors of start-ups to improve their product offering.

Innovative financing for nutrition

Innovative finance includes a set of financial solutions that create scalable and effective ways of channelling both private money from the global financial markets and public resources towards solving pressing global problems. It embraces two elements—more resources and more efficient use of these resources, or more money for nutrition and more nutrition for the money available (Box 1).

In private sector financing, institutional investors and venture capitalists are motivated by financial returns. In this setting, it remains a critical question how certain nutrition innovations—for example, personalized nutrition, alternative proteins that cater to a health-conscious, affluent market—may help people living on less than US$2 per day. An equity lens is therefore essential for evaluating business opportunities that can have positive nutrition impacts for all. A growing number of venture capital firms have begun to tie their carried interest (financial returns) to impact metrics and key performance indicators (impact returns) to ensure better alignment. Also, a few early examples of equity-focused efforts are emerging. Food Systems for the Future is supporting the creation of Africa's first fully automated black soldier fly insect protein facility[28] as a cheaper, more stable local alternative to soybean and fishmeal animal feed in an effort to improve the poultry value chain and thereby increase the affordability of animal-source protein. Similarly, NourishedRx, a start-up backed by prominent venture capital firms, collaborates with health plans and providers to service nutritionally sensitive chronic diseases with personalized meal kits and groceries to support the management of their condition.

Mechanisms and initiatives

In response to the persistent need to find better ways of partnering with the private sector, as well as investor demand for instruments that deliver social returns, Palladium Impact Capital, in partnership with The Power of Nutrition, has mapped initiatives in health, education and the environment with a view to assessing examples that could be applied to nutrition (Box 2). This mapping exercise indicated that nutrition lags behind other sectors such as education and health in catalysing innovative finance. Only two nutrition bonds (mobilizing less than US$500 million) have been issued, as compared with 634 green bonds (over US$290 billion in 2020 alone). In total, 31 health and 24 education social/development impact bonds have been issued, but only one in nutrition. The global health sector has mobilized over

BOX 1

The Power of Nutrition: a case study

Starvation has always been a powerful rallying tool for charitable support. Events such as the Ethiopian famine of 1984 kicked off innovative financing for nutrition and launched the nutrition impact industry. Specialized foods for severely malnourished children such as ready-to-use therapeutic foods or RUTF have been developed and a new attitude to global poverty—culminating in the Millennium Development Goals—articulated the vision that the world could be proactive to the cycle of catastrophes.

In this context, the first Nutrition for Growth (N4G) Summit was hosted by the United Kingdom in 2013. A core pillar of that event was the burden of childhood malnutrition, estimated at the time to be impacting 160 million children under the age of 5 (ref. 45). The Children's Investment Fund Foundation, a lead sponsor of the summit alongside the then UK Department for International Development, sought to catalyse a new innovative stream of financing for the sector.

This led to the development of a new global innovative financing facility for nutrition, The Power of Nutrition (https://www.powerofnutrition.org), officially launched in 2015 with the support of the Children's Investment Fund Foundation, the UBS Optimus Foundation and the UK government via the Department for International Development. The Power of Nutrition sought to catalyse more donor financing for the sector, using the incentive of at least a fourfold leverage for every dollar raised.

As a matching platform, The Power of Nutrition's mandate has been to mobilize funding, resources and expertise from across different actors to maximize impact for nutrition; and always with an emphasis on systems-strengthening, to support existing national nutrition infrastructure. To date, the platform has demonstrated success in leveraging resources particularly from philanthropic foundations, bilateral partners and domestic governments. Programmes in partnership with the World Bank, for example, pool grant financing from donors, which is matched by international development assistance funds, successfully leveraging more than half a billion dollars for nutrition programming. This has helped to avert more than 600,000 cases of stunting and increase the prioritization of nutrition within national budgets, who are incentivized to allocate 'skin in the game'[46].

However, participation by the private sector within the ecosystem seeking to improve nutrition outcomes for the most vulnerable is challenging; finding alignment between profitability for a business, affordability for a target 'user' and nutritional benefit for that user is highly complex. Pure market solutions are not always applicable. Instead, a blend of cross-sectoral partnerships are often more workable. For example, The Power of Nutrition has convened a quasi-private-sector partnership model in Zambia to promote scale-up of maternal micronutrient supplementation by facilitating collaboration among a private philanthropic foundation, a civil society organization operating on the ground and the government[47].

BOX 2

Existing mechanisms across innovative financing categories

(1) **Gift/donation aggregation mechanisms:** aggregation of voluntary donations, including in-kind contributions, from corporations or individuals to social (or environmental) causes.
(2) **Pay-for-results mechanisms:** deployment of funds only when predetermined outcomes are achieved and verified (as opposed to financing inputs).
(3) **Blended finance and impact investing:** both leverage development finance, philanthropic funds and impact-driven capital to mobilize investment capital in vehicles, businesses and projects for sustainable development.
(4) **Market guarantees and insurance instruments:** instruments that mitigate the risk (actual or perceived) that prevents capital flows.
(5) **Social bonds (capital markets):** bonds or notes are issued in capital markets to finance businesses and/or projects for specific social (or environmental) impact, and lenders receive principal and interest at maturity (unlike pay-for-results, where returns are tied to outcomes).
(6) **Strategic partnerships:** structuring relationships with partners to mobilize complementary resources.

US$285 million through five impact investment funds, but only one nutrition impact fund. As such, the fear is that nutrition is at high risk of repeating in innovative finance the orphan status it has in traditional overseas development aid.

On the upside, the analysis revealed that there is potential for nutrition across many innovative financing categories, including payment-by-results, blended finance, impact investing, market guarantees and capital market social bonds. Palladium Impact Capital and The Power of Nutrition are now developing Nutrition Ventures—a nutrition innovative financing hub to identify, market test and scale a range of innovative financing products, including bonds, in the same way green bonds have catalysed hundreds of billions of investment dollars in climate and environment. Nutrition Ventures will ensure that innovative finance solutions are integrated within the broader ecosystem of actors targeting better nutrition outcomes at scale.

Taxes on unhealthy foods offer yet another opportunity for raising innovative financing from the private sector. Over 62 countries are currently taxing sugar-sweetened beverages, and there is growing momentum to include other high-fat, -salt and sugary foods to this list. Repurposing agrifood policies to support healthier diet and reorient food systems provides another untapped opportunity to help generate 'more money for nutrition' and deliver 'more nutrition'. These must, however, be accompanied by complementary policies, such as food reformulation and fortification, labelling and marketing regulations.

No other sector touches as many of the SDGs as nutrition. Institutional investors who wish to deploy assets that are SDG aligned will find it impossible to ignore the nutrition sector. But the market is currently ill-prepared to either accept or monitor that investment. The IRIS+ impact measurement system aims to directly measure nutritional impact (child stunting prevalence)[29], and a few others implicitly include some nutrition-related elements[12], but there is no systematic and explicit measurement of investment impacts on healthy diets, overweight/obesity and diet-related NCDs.

Shareholder advocacy and coalition building

Recently, there has been a surge in investor activism around leveraging financial markets to achieve global nutrition goals. This includes shareholder advocacy and coalition building on nutrition and diet-related health issues and development of nutrition-related investment funds across venture capital, institutional investors, impact investing and large corporates.

Non-profit and advocacy organizations such as the Access to Nutrition Initiative and ShareAction have begun to build investor coalitions to drive sustainable nutrition investing[30–32]. At the Tokyo Nutrition for Growth (N4G) Summit in December 2021, a landmark pledge by 53 institutional investors representing US$12.4 trillion in assets under management called on food and beverage companies to report on the healthfulness of their product portfolios and sales; use a nutrient profiling system (NPS) to define healthy products; and adopt SMART governance, strategy, lobbying and transparency commitments[32]. Twenty-seven additional investment firms have joined the pledge, totalling US$19.9 trillion assets under management and 80 investor signatories (as of December 2022).

At the recent US White House Conference on Hunger, Nutrition, and Health, a coalition of investors developed the Food, Nutrition and Health Investor Coalition, pledging US$2.5 billion in private investment at the convergence of food technology and human health (https://fnhic.splashthat.com/).

On a global scene, the Good Food Finance Network was created as a network of high-level leaders, technical experts and agropreneurs from the finance, business and public sectors, combining their resources and intellectual capital to promote investment and provide finance solutions for transforming the food system to produce healthy, accessible, sustainable and affordable food.

Guiding nutrition financing forward

Despite accelerating interest in nutrition across government, private sector and healthcare system stakeholders, challenges and barriers exist to responsible investing in nutrition. Beyond scaling-up basic nutrition interventions by governments, and managing and monitoring impacts, there is a lack of scientific consensus on a standardized definition of healthy foods. Furthermore, the landscape of metrics and comparable data available for quantifying the financial and social return on investment in nutrition is limited and heterogeneous. This unregulated sustainable investing environment has led to the rise of 'nutri-washing'.

Definition of healthy food

A standardized, unanimous and practical definition of the healthfulness of food is essential for effective investment in nutrition. Governments, independent scientific bodies and industry experts have attempted to develop such a definition but are encumbered by complexity, nuance and scientific dissonance. Achieving an operational definition is further complicated by the lack of globally accepted population-level optimal nutrient intake requirements, limited and imperfect data on the nutrient and 'anti-nutrient' content of foods globally, and the lack of scientific consensus of the health implications of processing, cooking, additives and other non-nutritive attributes of foods[33].

Nutrient profiling systems

In the absence of a fixed definition of healthy food, NPSs are the scientific community's best tools for evaluating the overall healthfulness of food and beverage products. However, with close to 400 NPSs catalogued as of 2018[34], there is a huge range of component attributes, scoring thresholds and weighting schemes. Further, the overwhelming majority are wrought with scientific or practical limitations[35–37]. A recent overview of the correlation of three major (non-industry funded) NPSs—Food Compass, Health Star Rating and Nutri-Score—across 8,000 foods found correlations as low as 0.17–0.25 for grain products, and 0.36–0.49 for fats and oils, suggesting that they score foods discordantly[38].

Metrics for ESG–Nutrition investing

The recent growth of ESG investing requires a scientifically grounded evidence base to validate the materiality of business decisions for social and environmental impact. At minimum, ESG investing requires standardized, quantitative and output-oriented metrics; readily available, robust longitudinal datasets; and an independent regulatory body to promote, oversee, audit and disseminate the findings of evaluation on these metrics.

Major global ESG disclosure standards bodies have developed food-sector-specific disclosure requirements to standardize business reporting on sustainability in specific thematic areas. In parallel, non-profit foundations and alliances are developing comprehensive indices to track the performance and rank food sector businesses on key social and environmental sustainability issues[39–42] (https://accesstonutrition.org/).

However, when it comes to ESG investing and nutrition and health in the food sector (ESG–Nutrition), none of these minimum requirements are currently met. There are significant limitations to the landscape of available ESG–Nutrition metrics[12]. Metrics aimed at quantifying the healthfulness of a business's product portfolio often single out specific nutrients of concern (for example, added sugar, calories) or broad product categories (for example, plant versus animal source foods) without considering healthfulness in a more holistic manner. Others require subjective decisions by the reporting entity. Few frameworks touch on the equitable distribution of healthful foods, and those that do evaluate commitments or strategies rather than quantifiable metrics of the relative affordability and accessibility of healthful products.

Metrics evaluating marketing practices focus on extreme misdemeanours or vague commitments by the company (https://accesstonutrition.org/), rather than overall marketing outputs and spending. Still others are woefully cumbersome or impractical for objective reporting. Finally, the majority of metrics are designed for evaluating 'Big Food' (large, multinational food companies), and are challenging or impractical to implement for small and medium enterprises, particularly in low- and middle-income countries. Metrics for ESG investing in nutrition must therefore also be nimble to the resource context and business stage and size.

Beyond needing standardized metrics for ESG investing, data systems are critical for bringing such metrics into use by investors and businesses. However, longitudinal data about the nutritional outputs or impacts of businesses are not publicly available, and no independent body governs monitoring and evaluation around ESG–Nutrition performance, even in the developed world. In the developing world, the situation is even more dire.

The rise of nutri-washing

Within this challenging and unstandardized landscape, food sector businesses and investors both recognize the tremendous opportunities in responding to demand for healthful food, and the corresponding reputational viability and fiscal risks of failing to pivot towards this demand. Food sector businesses that have anticipated this shift, however, report voluntarily on ESG performance, but without consistent frameworks for reporting and without clarity about which metrics are disclosed or to whom disclosures are reported. A parallel trend is evolving in the investing space. Major institutional investors develop 'nutrition' funds with thematic goals of addressing global sustainable nutrition trends, but these are constrained by a lack of nutrition-specific criteria or metrics used to inform their investments[25,26].

Nutri-washing—similar to greenwashing in financial markets—thus becomes a real concern. Food companies and investors alike may be conveying false impressions or providing misleading information about how a company's practices and portfolios align with nutrition and health, with no real oversight or consequence.

The future of nutrition financing

The gap between the need for financing and available financing is growing. While the historic commitments of nearly US$30 billion at N4G in

2021 will contribute towards filling some of this gap for undernutrition targets in low-income countries, the need for concessional, private sector and catalytic innovative finance is more urgent than ever. In this regard, the nutrition sector has much to learn from the climate movement, which benefitted from public capital investing into new technologies to the point where renewable energy can now be generated more cheaply than fossil fuel energy.

A similar mentality is required today, bringing together metrics (is this investment nutrition-positive or not?), advocacy (who is making a positive impact and who is not?), catalytic capital (leveraging the balance sheets of the development finance institutions and multilateral development bank communities) and strategic capital (incentivizing and encouraging companies and investors to invest into the food systems of tomorrow). With these four elements in place, private sector investment groups will pivot towards nutrition-positive investments, just as they did with climate investment and initiatives.

The ecosystem must respond with standardized metrics, data collection and mechanisms to hold the food sector accountable for producing food and beverages aligned with human health and based on the latest scientific evidence. A holistic and transparent framework for reporting, embedded with tools rooted in the latest scientific evidence, can represent the critical component for ensuring effective and sound nutrition-based investing into the future. Scientific consensus around an accurate, objective and validated NPS is a crucial step towards achieving an operational definition of healthy food for use in responsible investment globally. The key here is to educate investors as to the fundamental impact and return potential of investing into nutrition.

Despite these challenges, sustainable investing in nutrition is achievable. The current crisis is the opportunity to make this change a reality. The world has changed structurally with the Ukraine crisis, superimposed on the global climate and economic crises. The associated stress will continue, but it also provides a new opportunity to catalyse more investment into environmentally sensitive food production methods and investment strategies that reduce all forms of malnutrition, including through systemic changes in health systems. The G7 Hiroshima Summit in 2023 hosted by Japan and the G20 offer ideal platforms to highlight this critical agenda and potentially launch a new 'nutrition investment fund' to address the challenges laid out in here, and thereby catalyse new innovative financing for nutrition.

Conclusions

The limited evidence available makes it clear that existing public sector national resources are inadequate to deliver on global SDG targets related to nutrition and diet-related disease, necessitating the need to crowd-in innovative finance from the private sector. While funding commitments are important reflections of political will and prioritization, these resources are not always used most effectively. Collectively, while we can aim for 'more money for nutrition' we also need to deliver 'more nutrition for the money'. Tools—such as nutrition public expenditure reviews, public financial management systems and Optima Nutrition—that allow allocative efficiency analysis, nutrition-responsive budgeting and tracking, and results-based financing approaches can be used to enhance efficiency and achieve better results with existing resources[43,44]. Public and private sector partners need to work in concert with each other to maximize both financing and its impact. Public policies can create enabling environments for leveraging additional finance that further enables stronger public–private partnerships. If market conditions begin to reward and support food and nutrition security, and shape markets accordingly, that would be a game-changer.

The technological and policy advances in the private sector referred to above, albeit currently focused on the developed world, frequently inspire similar changes in the developing world as well, as has been the case for climate change. Venture capital seeks to invest in disruptive technologies, such as solar, which although expensive out the outset, at scale can have a powerful positive impact on society at large, including the poorest regions of the globe. The rapid progress in innovative financing around carbon and greenhouse gas emissions and around antibiotic use in industrial livestock provides clear examples of how this can be an effective and rapid tool for positive change across the globe.

Disrupting our current food system and health systems represents one of the most powerful opportunities to improve the state of human health while simultaneously generating large economic and planetary gains—an opportunity that must not be squandered. The G7 and G20 meetings in 2023 offer an ideal opportunity to crowd-in substantive innovative financing for nutrition, accompanied with four essential actions: robust metrics alongside strong advocacy on the merits of this approach; catalytic financing; and strategic capital for private sector companies that operate in the food sector. A new 'nutrition investment fund', if launched by the G7 and the G20, could support the setup of an independent monitoring body, and the development and enforcement of appropriate metrics that will help level the playing field, and also dissuade nutri-washing by making food companies and investors accountable with real oversight and incentives.

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Competing interests

The authors declare no competing interests.

Additional information

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