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Sustainable Financing Initiative for School Health and Nutrition

The Rockefeller Foundation

Innovative Financing for School Feeding

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- *Technical Background Paper: Debt Swaps for School Meals: Opportunities and Constraints*, by Gail Hurley and Matthew Martin. Data support by David Waddock. Development Finance International.
- *Technical Background Paper: Climate Finance for Sustainable School Feeding: Exploring the Options*, by Nathaniel Mason, Tony Kamninga, and Maryam Rezaei. ODI Global.
- *Technical Background Paper: Prospects of earmarking Africa's oil and mineral revenues for sustainable school feeding programmes*, by Olha Homonchuk and Tom Hart. ODI Global.

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Disclaimer

Abbreviations

AfDB	African Development Bank
AfDF	African Development Fund
AMC	Advance Market Commitment
CDM	Clean Development Mechanism
CGD	Center for Global Development
COP	Conference of the Parties to the UN Framework Convention on Climate Change
DFI	Development Finance International
DIB	development impact bond
EDC	Education Development Center
FAO	United Nations Food and Agriculture Organization
FCDO	UK Foreign, Commonwealth and Development Office
GAFSP	Global Agriculture and Food Security Program
GCF	Green Climate Fund
GCNF	Global Child Nutrition Foundation
GDP	gross domestic product
GPE	Global Partnership for Education
HIPC	Heavily Indebted Poor Countries initiative
HGSF	Home-Grown School Feeding approach
IADB	Inter-American Development Bank
IDA	International Development Association (World Bank)
IDFC	US International Development Finance Corporation
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation (World Bank)
IFFEd	International Financing Facility for Education
IFFIm	International Finance Facility for Immunisation
IMF	International Monetary Fund
IMO	International Maritime Organization
LICs	low-income countries
LMICs	lower-middle-income countries

MCF	multilateral climate fund
MDB	multilateral development bank
NDC	Nationally Determined Contribution
ODA	official development assistance
ODI	Overseas Development Institute, now known as ODI Global
OECD	Organisation for Economic Co-operation and Development
SIB	social impact bond
PPP	purchasing power parity
PRONAE	Mozambique National School Feeding Program
SDGs	Sustainable Development Goals
SFI	Sustainable Financing Initiative for School Health and Nutrition
SMC	School Meals Coalition
SMEs	small and medium-sized enterprises
SSB	sugar-sweetened beverage
TNC	The Nature Conservancy
UNCTAD	UN Conference on Trade and Development
UNESCO	UN Educational, Scientific and Cultural Organization
UNICEF	UN Children's Fund
UNU-WIDER	UN University World Institute for Development Economics Research
VAT	value-added tax
WFP	World Food Programme
WHO	World Health Organization

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Executive Summary

School meals change lives and expand opportunity – but financing constraints are limiting access in countries where the benefits would be most marked. Providing children with a nutritious meal at school generates multiple benefits, cutting across the traditional policy siloes separating food security, education, health, and social protection. It enhances nutrition, increases school enrolment and improves learning, alleviates poverty, and provides vulnerable households with a safety net. Governments across the world's poorest countries increasingly recognise the benefits of school feeding. Many have adopted bold strategies for expanding access. However, financing constraints are acting as a brake on progress. This report looks at option for releasing that brake through innovative financing strategies aimed at mobilising new and additional resources. National 'sin taxes' on alcohol, tobacco, sugar-sweetened beverages and ultra-processed foods could supplement wider tax revenues, with some – or all – of the proceeds directed to school meals. Taxing public bads to produce a public good combines efficiency with equity. At the international level, debt relief – including debt swaps – climate finance, natural resource revenues, risk guarantees, and international taxation could supplement existing aid for school meals, which remains inadequate.

School feeding programs have a proven track record in accelerating progress towards a broad spectrum of Sustainable Development Goals (SDGs). Well-designed and properly financed programs improve nutrition and food security, alleviate childhood poverty, increase participation in school, and strengthen learning outcomes. Procurement for school feeding provides governments with a vehicle for supporting smallholder agriculture, building more resilient rural livelihoods, promoting healthy diets among children, and creating incentives for the development of low-carbon, sustainable food systems. With efforts to achieve the SDGs falling far short of the ambitious targets set for 2030, school meal programs could turn the tide.

The current reach and quality of school meal programs is most limited in the countries where the need is most urgent – and the impact could be greatest. Current coverage rates are just 18 percent in low-income countries (LICs) and 39 percent in lower middle-income countries (LMICs). Even these figures understate the scale of the deficit. Much of what is counted as "coverage" comprises intermittent, poor-quality meals. Children in LICs and LMICs are at the epicentre of the SDG delivery gaps. They account for a large and rising share of childhood hunger and extreme poverty, with adverse consequences for education, health, and equity. Expanded access to high-quality school meal programs could transform this picture, improving millions of lives.

Increased finance is critical. While delivering efficient school meal programs is about far more than finance, budget constraints are holding back progress. Many governments lack the fiscal space necessary to scale up school meals. In many countries, real budgets have been falling in the face of rising inflation. Scenarios developed by the Sustainable Financing Initiative estimate that coverage rates could be raised to 60 percent, reaching another 236 million children. Assuming a linear increase in coverage over a five year period, the incremental cost would amount to around $3.6 billion a year to 2030, or around $10.8bn in cumulative annual average spending. That cost would have to be covered through a mix of domestic budgets and international development finance, most of it in the form of grant aid or concessional lending.

This report looks at the role innovative financing could play in closing the investment gap. Slower growth, unsustainable debts, limited access to affordable finance, and high inflation are preventing governments from mobilizing domestic resources. Governments could do more to increase tax-to-GDP ratios and redirect general subsidies to targeted support; LICs and LMICs

forgo 2.5 percent of GDP in revenues through tax exemptions and a similar amount through general subsidies. However, innovative finance, broadly defined as resource mobilization outside of standard budget revenues and international aid, could unlock new and additional resources.

The crisis in SDG delivery and climate change have created a new momentum behind innovative finance. Governments across the world are exploring a wide range of domestic resource mobilization measures, including "sin taxes", earmarked funding, and green levies. On the international stage, there is renewed interest in instruments ranging from global wealth taxes to carbon taxation, debt swaps, and innovative climate finance. Some of these instruments could help to finance an expansion of school meal programs.

"Sin taxes" already play an important role in national budgets and health financing. Excise taxes on alcohol, tobacco, and sugar-sweetened beverages (SSBs) produce a triple benefit. They reduce demand for products harmful to public health, generate revenue, and can be designed to produce progressive outcomes (with poorer households securing more of the benefits and wealthier households carrying a greater share of costs). Modelling by the Center for Global Development (CGD) estimates that overall tax revenues in LICs and LMICs could rise by 0.6-0.7 percent of GDP (and 3-6 percent of tax revenues, depending on the country) with increased taxation on "public bads" associated with unhealthy diets. The Philippines provides a striking example of what can be achieved through well-designed sin taxes: much of the country's public health system is now funded directly through taxes on alcohol and tobacco.

Taxes on sugar-sweetened beverages have a special relevance for school feeding. Products in this category often target children, raising the risk that they become overweight or obese. While most countries now have in place some form of SSB taxation, many LICs and LMICs appear to set taxation levels too low, and rely to much on ad valorem taxes – proportionate to the value of the product taxed – which are less effective. However, the revenue mobilizing potential of SSB taxation is limited by demand elasticity and taxable potential. Despite these limited prospective revenue flows, taxing the "public bad" of SSBs to finance the "public good" of the benefits that come with school feeding provides governments with a compelling political proposition as well as opportunities for resource mobilization.

Taxation of natural resource wealth – including hydrocarbons – may be an option for many LICs and LMICs. Hydrocarbon wealth has often been linked to the "resource curse", when oil and natural gas revenues lead to slower economic growth, corruption, a failure to develop tax systems, and development models that skew opportunities away from the poor. There are exceptions to the rule. For example, Bolivia has used hydrocarbon wealth to finance a universal school meals program. Research carried out for this report by ODI Global looks at three countries – Mozambique, Senegal, and Tanzania – where significant new flows of hydrocarbon wealth could help to finance national school feeding programs. Outcomes will depend on political factors, including the willingness of governments and national elites to place investment in national development above the pursuit of private gain. With prospective new revenue streams in the order of 2-3 percent of GDP and a government committed to a fairer distribution of benefits from hydrocarbon wealth, Senegal is well placed to demonstrate what is possible.

There is a strong case for governments to consider earmarking revenues for school feeding. The case against earmarking is well known. Assigning revenues to specified budget line items can introduce rigidity and volatility into public finance systems. However, "soft earmarking" can play an important role in financing priority areas across political cycles, and in demonstrating that taxation

leads to identifiable benefits. Earmarking revenues from SSB and/or ultra processed food taxes for school meals may help governments make – and win – the public case for taxation. Similarly, earmarking hydrocarbon taxes for school meals provides a mechanism for breaking the resource curse. More broadly, earmarking for school meals can help build social contracts between states and citizens in countries where confidence in taxation systems is limited. Earmarking for school meals is likely to be most plausible and effective where it is integrated into wider strategies for advancing public health, education, and social protection.

Much of the architecture for international innovative finance was developed in the decade after 2000 – but the SDG financing gap and the climate crisis have created new momentum. Innovative finance was identified as a key part of the SDG financing strategy under the 2015 Addis Ababa Action Agenda. It is a standing item on G7 and G20 financing agendas. The Global Solidarity Levies Task Force launched at COP28 in 2023 is assessing a range of international taxation options for mobilizing resources to support the Paris Agenda. Few of the approaches are new but they have attained new political relevance.

For international development finance, as for domestic budgets, there is no substitute for public finance. The combination of unsustainable debt and limited access to affordable development finance means that all LICs and most LMICs will require increased and concessional finance to expand the reach of school meals at scale. The World Bank's International Development Association (IDA) – the largest source of concessional development finance for LICs and LMICs – will have a critical part to play. The G20's Independent Expert Group has called for IDA funds to be tripled by 2030. More broadly, the multilateral development banks need to embrace a greatly expanded SDG financing role.

One innovative route to increased MDB financing for school meals could involve the International Financing Facility for Education (IFFEd). IFFEd uses a mix of paid-in capital and grants to underwrite MDB loan risks and subsidize loans. While geared principally towards LMICs, it has the potential to expand the reach of concessional finance. What is unique about IFFEd is the scale of the multiplier effects it generates. An additional $1 directed through the facility can mobilize an additional $4 in MDB support. For bilateral and philanthropic donors seeking to maximize impact for school meal spending, investment in IFFEd is a cost-effective proposition. While standard bilateral aid operations generate a 1:1 ratio of grants to overall finance, a donor commitment to provide $40 million in risk guarantees and $100 million in grants can multiply the transfer by a factor of seven.

The global health funds offer important lessons on innovative finance. The Global Fund to Fight AIDS, Tuberculosis and Malaria, and Gavi, the Vaccine Alliance were established in the early 2000s as independent legal entities. Despite some operating problems and criticism, the two funds have proven highly effective in mobilizing donor resources, combining strong investment cases with technical competence, an emphasis on national ownership, and evidence of impact. Both funds have provided institutional wrappers for a range of innovative finance vehicles. Around one-quarter of Gavi's finance is mobilized through innovative measures, including bonds and co-funding mechanisms. The Global Fund has negotiated 12 debt-swap arrangements. It also receives funding from corporate brands and an airlines tax delivered through UNITAID. While there is little appetite for the creation of new "vertical funds", school feeding could adapt some of the approaches developed by the global funds.

The debt crisis has opened up new opportunities for innovative finance. Unsustainable debt repayments in LICs and LMICs are crowding out social investment in priority areas, including school feeding. Scheduled repayments for these countries in 2024 amount to $89 billion – an average of 16 percent of government revenue. That figure represents more than governments are spending on basic health and education. Two-thirds of LICs and LMICs are either in, or at risk of, debt distress. The rapid increase in debt servicing to private creditors, China, and other emerging market actors has complicated the debt landscape. Converting unsustainable debt into investment public spending would open up new opportunities for the financing of school meal programs.

Debt swaps are an established part of the innovative finance toolkit. They have been deployed since the debt crises of the 1980s and 1990s, with creditors waiving claims and debtor governments committing to investing saved revenues in specified areas. The World Food Programme has participated in several food security debt swaps, including one on school feeding. There are distinct limits to the opportunities presented by debt swaps, however. Only a small group of Paris Club creditors provide swaps. Most of the debt covered is highly concessional, which results in limited revenue savings – and Paris Club rules limit the scope of non-concessional debt arrangements. While one recent debt swap enabled Ecuador to make significant savings on debt owed to commercial creditors, this was an exception to the general rule. Much of the current attention to debt swaps is directed to marine conservation and climate change, rather than school feeding.

The most effective way of converting unsustainable debt into human development investments is through debt relief. Countries with unsustainable debts need debt reduction, restructuring, and/or access to affordable finance in order to expand fiscal space. This is what has happened since 1996 under the Heavily Indebted Poor Countries (HIPC) initiative, which has released 1-2 percent of GDP and boosted social sector investment. While debt swaps could play a useful supplementary role in some countries, the most innovative strategy would be a new multilateral debt relief framework comparable in scale to the HIPC initiative.

The climate crisis has spurred a step increase in finance geared towards the Paris Agenda goals, including innovative finance. Climate finance flows have increased dramatically over the past five years. While mitigation finance dominates, international public finance for adaptation in LICs and LMICs is also rising steeply. Carbon pricing represents the main market-based innovation. Over 70 countries now have carbon pricing programs, mobilizing $105 billion in revenues in 2023. These revenues are set to climb sharply as the green transition gathers space.

While school feeding programs offer significant opportunities for carbon mitigation and, more especially, adaptation, they have been bypassed by climate finance. Research carried out for this report highlights some of the challenges by looking at the portfolio of the Green Climate Fund (GCF), an important source of multilateral finance. Currently, school feeding is a marginal sub-theme in GCF operations. The problem can be traced partly to the invisibility of the issue. School feeding has never figured with any prominence in high-level climate communiqués. In addition, it is largely invisible in Nationally Determined Contribution (NDC) papers through which governments table their Paris Agenda commitments, with the exception of Burundi and Malawi. Lack of evidence on the carbon mitigation and adaptation effects of school meal programs also prevent them from being included in climate finance. What is true for the GCF appears to hold for the portfolios of the MDBs.

More could be done to establish evidence of the wider climate benefits of school feeding programs. Procurement for school meals can support more resilient rural livelihoods, create markets for drought-resistant seeds, and enhance food security by increasing access to biofortified foods. Governments can use public procurement budgets to create incentives for low-carbon, regenerative farming. School meal menus can be designed to encourage the development of less meat-intensive diets, which in turn can help reduce the carbon footprint of food systems.

Interest in blended finance, or the use of public funds to attract private capital, has increased as the SDG financing gap has widened. In 2023, $15 billion in blended finance deals were transacted. The market is dominated by energy and infrastructure. Health and education together account for just 6.5 percent of blended finance deals, with a heavy concentration of "social impact" bonds and "education/health outcome" funds. These arrangements typically involve the provision of philanthropic capital with payments guaranteed against specified outcomes by donors. Very little private capital has been mobilized. Given the dominance of public finance in providing school meals, opportunities for private investment are likely to be limited.

Investment in smallholder agriculture and supply-chain development may offer some opportunities for blended finance in school feeding. Procurement for school meals creates market opportunities for smallholder farmers and small and medium-sized enterprises (SMEs) involved in supply chains. Translating those opportunities into investment propositions is often hampered by credit constraints, restricted access to market information, and the higher transaction costs of smaller-scale production. These barriers can be lifted by directing blended capital towards agricultural cooperatives. There may be scope for multilateral agencies to work with private capital funds to identify investment opportunities linked to school feeding.

International taxation is back on the agenda. In recent years calls have been renewed for international taxation to finance investment in global public goods and the SDGs. Current proposals range from a global wealth tax applied to billionaires (tabled at the G20), to a financial transactions tax, marine and aviation fuel taxes, and a climate change tax. In each case, the proposals would mobilize significant revenues – between $200 billion and $250 billion annually in the case of the wealth tax.

From a school meals financing perspective, international taxation proposals have to be assessed not just against their intrinsic merits, but against the likelihood of their adoption by 2030 and their revenue potential for LICs and LMICs. The marketplace for innovative finance proposals is increasingly crowded. Advocates for international action on climate change, biodiversity, food system reforms, and most of the 17 SDGs have sought to make the case for their specific concerns. School feeding has yet to figure with any prominence. There are compelling economic and political grounds for changing this picture. However, advocates for school feeding need to consider a range of factors, including:

- **Potential trade-offs between feasible early delivery and scale:** Global carbon levies and wealth taxes have a very large resource mobilization potential, but the political economy of change does not point towards early delivery for school meal financing. The taxes have to be mobilized and redistributed. By contrast, sin taxes are well-established and provide a direct link to school feeding goal, but revenue mobilization potential is more limited.

- **Tensions between debt relief and debt swaps:** Debt relief has to potential to greatly expand the fiscal space available to governments, but progress towards a multilateral debt reduction framework has been glacial. Debt swaps offer more limited fiscal benefits, but could be more directly targeted at school meals. Debt profiles are critical in determining options.
- **Earmarking versus general revenues:** Earmarking for school meals is a compelling advocacy proposition backed by credible efficiency and equity benefits. The challenges include positioning school meals as a national priority and dependence on potentially volatile revenue sources. General revenues offer more stable financing *if* governments are politically committed to school feeding.
- **The strength of linkages to school meals:** Taxes on processed foods (a source of unhealthy diets) have an obvious link to the provision of school meals (which can promote healthy eating habits). By contrast, carbon levies have a more circuitous connection via food system reform and the place of school meals in promoting a just climate transition.
- **Narratives matter:** Framing the case for innovative finance on school feeding as a stand-alone intervention is unlikely to gain the traction necessary to shift policy. By contrast, positioning school feeding as part of a wider strategy for building fairer, more inclusive societies, advancing education and health and education goals, and addressing wider concerns over food system reform and climate change has the potential to tap-into wider reform currents.
- **The potential for coalition-building:** By extension, advocacy for innovative finance on school meals needs to be informed both by evidence of impact, and by a recognition that the demand is being pitched into a crowded market place for claims on government finance. Positioning school meals in wider coalitions for reform on climate, public health, and sustainable food systems is more likely to deliver results.

Introduction

This report looks at the role that innovative finance could play in mobilizing resources for investment in school meals. It has been prepared by the Sustainable Financing Initiative (SFI) of the School Meals Coalition for The Rockefeller Foundation plans to support national and international school feeding efforts to reach another 100 million children by 2030. We draw heavily on background research commissioned by the SFI on debt, climate finance, and natural resource taxation.

There is no fixed definition of innovative finance. According to the UN's expansive definition, "innovative finance includes mechanisms and solutions which increase the volume, efficiency, and effectiveness of financial flows" (United Nations Economist Network. n.d.). For the purposes of this report, we consider innovative finance as any measure with the potential to mobilize new and additional financing for school meals, whether as a stand-alone intervention or (more plausibly) as part of a wider strategy for accelerating progress towards the SDGs.

Innovative finance should be viewed as a complement to, rather than a substitute for, "conventional" public finance. School feeding programs around the world are overwhelmingly financed by national budgets. For governments seeking to increase the reach and quality of school meal programs, there is no substitute for domestic resource mobilization coupled with efficient and equitable public spending. International development finance has a vital part to play in supporting national efforts, especially in LICs. Here, too, there is no substitute for the public finance underpinning grants and concessional support. However, innovative finance could play an expanded role in mobilizing new finance, expanding the fiscal space available to governments, and catalysing change.

Innovative finance is an old concept that has gained a new lease on life. Much of the current innovative finance architecture was built in the decade after 2000. With development assistance falling far short of the levels needed to achieve the Millennium Development Goals, the precursor to the SDGs, and traditional development finance proving unfit for the purpose of tackling major health challenges, notably HIV/AIDS, the international community looked to new mechanisms. The creation of the multilateral health funds – the Global Fund to Fight AIDS, Tuberculosis, and Malaria, and Gavi, the Vaccine Alliance – marked a sea change. Calls to make greater use of innovative finance were enshrined in the Monterrey Consensus (2002), endorsed by G7 and post-2008 G20 summits. The creation of a Leading Group on Innovative Financing in 2006 reflected a growing concern to identify and use new mechanisms to finance global public goods, supplementing official development assistance.[1] The 2015 Addis Ababa Action Agenda called for "additional innovative mechanisms" to mobilize public and private resources for development financing.

The climate crisis and the slow pace of progress towards the SDGs have triggered a renewed concern to mobilize innovative finance. The G20's Sustainable Finance Working Group called in 2023 for governments to step up efforts to raise innovative finance to support the SDGs. Many governments are exploring innovative policies aimed at expanding the fiscal space available for investment in critical SDG recovery priorities and the green transition. On the international stage, MDB reform, debt relief, and sovereign bond markets have figured prominently in approaches to innovative finance. International taxation is also back on the agenda. Launched at COP28 in 2023, the Global Solidarity Levies Task Force co-chaired by Barbados, France, and Kenya has reprised the spirit of the Leading Group on Innovative Financing for Development. It will report in 2025 on a range of international taxation options, including carbon levies, and taxes on aviation and maritime fuel. At the 2024 UN global summit on biodiversity, governments agreed to introduce a small voluntary

levy on companies using genetic data to finance a biodiversity conservation fund. Reflecting a wider concern over rising global inequality and the negligible marginal tax rates paid by billionaires, the Brazil Presidency of the G20 commissioned an influential report on billionaire wealth taxation.

Much of what is counted as "innovative finance" involves recalibrating conventional instruments to achieve specified development goals. Such established measures include blended finance and risk guarantees, impact investment, the taxation of "public bads", bond issues, debt relief and debt conversion, climate finance, earmarking taxes, and special levies. Many of the approaches are distinctly non-innovative in nature, though the potential development outcomes are in some cases significant.

Not all of the interest in blended finance reflects a concern to accelerate progress towards the SDGs. For several major donors, a growing interest in blended finance has gone hand in hand with a failure to act on aid financing commitments. Many governments and philanthropic organizations have also embraced innovative financing approaches while exhibiting less interest in fair taxation and equitable public finance. While blended finance and innovative public-private partnerships are critical for supporting investment in the SDGs and a green transition, they can also act as a smokescreen obscuring the urgent need for expanded flows of concessional development finance and domestic public finance.

Innovative finance has largely bypassed school feeding. In part, that reflects the critical role of domestic public finance and ODA in funding school meals . By comparison with, say, the energy transition or economic infrastructure development, school feeding offers more limited opportunities for private investment. Even so, school feeding has figured far less prominently than might have been anticipated in the dialogue on innovative financing through debt conversion, the taxation of "public bads", and climate finance. The contrast with the global health funds is striking. While there are limits to what is feasible in terms of resource mobilization through innovative finance, school feeding appears to lag far behind what is achievable – and that gap represents a financing opportunity.

The backdrop to the debate on financing for school feeding is an SDG "polycrisis". The term "polycrisis" was coined to describe political, economic, and social crises which, through their mutually reinforcing interactions, create aggregate threats greater than the sum of their parts. Similar effects are playing out across the SDGs. Slow progress towards the goals for reducing poverty and hunger is acting as a powerful brake on progress in health and education, which is in turn reinforcing poverty, hunger, and inequality. Expanding school meal programs is not a panacea. But it offers a powerful, evidence-based intervention with the potential to generate benefits across a wide range of areas, transforming the lives of millions of children.

This report is organized in three sections. Section 1 draws on recent research by the Sustainable Financing Initiative to assess the scale of the financing gaps for school feeding, and how domestic resources and development finance could close them. Section 2 looks at the potential for domestic resource mobilization through innovative financing approaches. It considers the role of excise taxes on "public bads" with a direct bearing on health, including sugar-based sweeteners (SSBs), and the scope for converting natural resource wealth into investments in school feeding programs. We also look at the debate over the earmarking of domestic revenues. Section 3 turns to international resource mobilization. It looks at the potential and the limits of innovative finance in a range of areas, including risk guarantees, debt conversion, bond issues, climate finance, and blended finance.

We conclude by analysing how innovative finance could boost school feeding by looking at three indicators: prospective revenue levels, the probability of early adoption or scale-up, and the likelihood of school feeding being identified as a priority area.

1. School meals coverage and financing gaps

Children in LICs and LMICs are at the forefront of two of the greatest challenges facing humanity – the eradication of extreme poverty and hunger. Some 320 million are living in households surviving on less than $2.15 a day (2017 Purchasing Power Parity PPP), which is almost half of the total number of people living in extreme poverty.[2] Many more live perilously close to the extreme poverty threshold. An estimated three-quarters of children in LICs and almost half in LMICs live in households that live on less than $3.65 a day. Hunger and food insecurity are pervasive. An estimated 257 million children in LICs and LMICs are living with under-nutrition. Moderate or severe food insecurity blights the lives of almost two-thirds of children in sub-Saharan Africa, the worst affected region.

Such deep poverty and hunger profoundly damage children's health, education, and life chances, contributing to avoidable illness, lower levels of school participation and diminished learning outcomes. Progress towards eradicating extreme poverty (SDG 1) and "zero hunger" (SDG 2) has fallen far short of the levels required to achieve the 2030 targets. Education has inevitably suffered. The School Meals Coalition, a government-led network spanning 106 countries, five regional bodies, and a large supporting cast of UN agencies, multilateral development banks, non-government organizations, and research institutions, has called for all children to have access to nutritious school meals by 2030. Recognition is also growing that school feeding could bolster wider food system reforms aimed at supporting sustainable agriculture, healthy diets, and the green transition.

The current reach of school feeding programs is most limited in LICs and LMICs. The coverage rate among children attending school in 2021 in LICs averaged just 18 percent, rising to 39 percent for LMICs, suggesting that around 144 million pupils were receiving meals. The term "coverage" should be treated with caution given the poor quality of some school feeding programs.

Current financing and the costs of school feeding

Efforts to expand coverage have gathered some momentum. Many countries, including Benin, Kenya, Nepal, Rwanda, and Sierra Leone, have unveiled ambitious plans to achieve universal school feeding. School feeding figured with some prominence during the 2021 UN Food Systems Summit and its subsequent Stocktaking Moment in 2023. The Rockefeller Foundation has committed to reaching 100 million children with school meals by 2030. The Brazilian Presidency of the G20 has identified school feeding as a priority area for its Global Alliance Against Hunger and Poverty, which was launched at the November 2024 G20 Summit. The World Bank has identified school feeding as a potential platform for expanding the reach of social protection programs and a priority for the recently replenished International Development Association (IDA) (Watkins et al 2024).

What would it take to finance a rapid expansion of school feeding programs by 2030? That apparently simple question has no simple answer. Estimating the cost of efficient and equitable school feeding programs is far from straightforward. The quality and consistency of school meals varies enormously across countries. Comparable cross-country data on budgets is limited. The contribution of communities in the form of labour, food, and services is largely undocumented, notably with respect to women's labour. An additional complicating factor is the wide range of organizations involved in the complex supply chains delivering school meals, including government agencies, the private sector, UN agencies, non-government organizations, and donors. Among these diverse groups, the transparency and consistency of financial reporting and accounting systems vary enormously.

The most comprehensive data available on the full cost of school feeding remains a study published over a decade ago, based on data from 2008 (Gelli and Daryanani 2013; Gelli et al. 2011). The study is important because it remains the only cross-country analysis to provide cost estimates based on a standardized fixed calorific ration and a 200-day school year, with data drawn principally from World Food Programme projects spanning 22 (then) low-income and 40 middle-income countries. Disaggregating the Gelli and Daryanani (2013) data for LICs and LMICs and adjusting for US inflation (though not regional food price inflation), a recent SFI paper derives an annual cost figure for school feeding of $64 per pupil annually.[3]

Budget data provides another window on school meal financing. It captures what governments allocate to the relevant budget heading, which may (or may not) reflect actual spending. WFP uses reported budgets (100 countries) and imputed estimates (76 countries) to derive budget allocations for LICs and LMICs of $41-42 per pupil annually. More recent analysis (Watkins et al.2024) captures the wide range of per pupil reported budget allocations. For example, India's universal primary school program has a per pupil allocation of around $26 (2023 current prices), while Brazil's universal program for pre-primary, primary, and secondary schools has an allocation of $55.

The costs of scaling up school feeding programs will reflect background characteristics and the targets set. Reaching highly dispersed rural communities is likely to cost more per child than reaching more concentrated urban or peri-urban dwellers. Landlocked countries reliant on food imports and a weak transport infrastructure will face higher costs than countries more self-reliant in food and/or with a more developed infrastructure. Centralized procurement and delivery models may have different cost profiles from devolved ones. More broadly, costs will also depend on the efficiency of procurement and supply chain management. Countries scaling up from a low base, where schools may lack cooking facilities, clean water and sanitation, may face substantial capital costs.

Two scenarios developed by the SFI provide back-of-the-envelope estimates for the cost of a global big push on school feeding. Increasing school meals coverage to 60 percent of children in LICs and LMICs on a linear basis over 5 years to 2030, with top-up costs for under-investment, would require incremental yearly spending of $3.6 billion over five years, or $10.8bn on an average annual basis (Scenario 1).

The financing requirements for a rapid scale-up of school feeding appear modest when measured against national income, but more significant when viewed through the lens of national budgets. The annual incremental cost represents 0.17 percent of GDP, but 25 percent of current education spending. For LMICs the gap represents 0.03 percent of GDP and around 5 percent of the current education budget. Many governments across LICs and LMICs are currently cutting real spending in education and other key social sector budgets.

International aid plays an important role in financing school meal programs in many countries. Aid represents over half of total financing for LICs, falling to 3 percent for LMICs. However, aggregate figures are skewed by large differences between countries; for example, India's school feeding program is almost entirely funded from domestic revenues. Data provided by the Global Child Nutrition Foundation (GCNF) indicates that *on average,* aid makes up a quarter of school meal financing in LMICs. Based on these very indicative parameters, the more ambitious scenario developed by the SFI would require a cost sharing arrangement under which governments provided additional annual financing of around $2.4 billion, with international development finance providing $1.2 billion, mainly in the form of grants and highly concessional finance.

The SDG "polycrisis" and fiscal space constraints

The financing challenges facing governments in LICs and LMICs seeking to expand school feeding programs cannot be viewed in isolation. They are part and parcel of an acute funding squeeze acting as a powerful brake on the already inadequate progress towards the SDGs. That squeeze has been compounded by a slowdown in economic growth, high borrowing costs, unsustainable levels of debt servicing, and low levels of domestic resource mobilization. Official development assistance, a critical source of financing for social services in many countries, has steadily declined as a share of GDP over the past 15 years, with the effects compounded by the diversion of development assistance towards Ukraine. The IMF's observations on sub-Saharan Africa have a wider resonance for LICs and LMICs: "The financing challenges are forcing countries to cut essential public spending and redirect development funds to debt service, thereby endangering growth prospects for future generations."[4]

The SDG project is facing its own "polycrisis". Only 17 percent of the SDG targets are on a trajectory consistent with delivery (United Nations 2024). Almost half are showing limited progress, with another third having stalled or slipped into reverse gear. On current trends, 600 million people will be living in extreme poverty in 2030 – double the SDG target level. Some 733 million people are living with hunger. The share of the world's population living with hunger is greater today than it was a decade ago. On the current trajectory, the number of people affected will be roughly the same as in 2015 when the SDGs were adopted (FAO et al. 2024). Stunting currently affects 148 million children. While that number is falling, at the current rate of progress, the SDG targets for stunting will be missed by the equivalent of 39 million children (UNICEF, WHO, and World Bank Group 2023). The goal of quality education for all has slipped out of reach for all key indicators, including learning achievement, enrolment, primary school completion, and transition to secondary school.

The term "polycrisis" was coined to describe a situation where disparate crises interact to generate impacts far greater than the sum of the parts (Whiting and Park 2023). In the case of the SDGs, the interactions between poverty, health, education, and other areas are likely to produce compounding and magnifying impacts, as the consequences of slow progress in one area (for poverty and nutrition) spill over into other areas (for example, education and health).

Already large SDG financing gaps have been widened by the slowdown in progress. The combined effect of slow progress, the associated backlog in delivery, and a shrinking time horizon has increased the SDG financing gaps. According to the UN, closing that gap will require $4.2 trillion in new finance annually to 2030 – an increase of two-thirds over pre-pandemic estimates (United Nations Conference on Trade and Development 2023). That top-down estimate is reflected in pressure on national budgets across LICs and LMICs. Governments already struggling to maintain

real budgets amid high inflation face a daunting list of urgent financing imperatives – in health, education, social protection, water and sanitation, and climate adaptation – that far exceed current fiscal capacity.

The wider SDG financing gaps complicate efforts to expand school feeding. Recent financing estimates from the ILO provide a comprehensive picture of the gulf between current budgets and the financing required to deliver a "social protection floor". The aggregate gaps (in 2024 prices) amount to $308.5 billion for LICs and $616.8 billion for LMICs. Those figures translate into 52.3 percent of GDP for LICs and 6.9 percent for LMICs, reflecting the size of national budgets and current levels of coverage. The total gap for children-related investment alone is $148 billion. The financing gap in education has almost doubled since 2015, representing 6.5 percent of GDP in LICs and LMICs (UNESCO, 2023) – and per pupil spending in LMICs has been falling. While such global costing estimates have margins of error, the figures highlight the gulf in resourcing.

Debt servicing is crowding out social investment. Faced with limited access to affordable development finance, many governments in LICs and LMICs entered sovereign bond and other commercial debt markets. As global interest rates rose and post-pandemic growth rates slowed, debt servicing demands have climbed. Debt service repayments for IDA-eligible countries are scheduled to reach $88 billion in 2024. Governments in sub-Saharan Africa are currently allocating on average 16 percent of revenue to external debt repayments – double the share of a decade ago, and more than they spend on health or primary education. Many are spending over one-quarter of tax revenues on debt servicing. As of April 2024, nine countries were in debt distress, and 51 were either in moderate or high risk of debt distress. While some countries have returned to commercial debt markets, they have typically done so at high cost: for example, Kenya refinanced its Eurobond debt at interest rates of 12 percent. Along with currency depreciation, such high rates have exacerbated financing constraints.

Fiscal pressures are mounting. Many countries are entering the final straight of the SDG era with financial plans aimed at cutting fiscal deficits. Some have placed the emphasis on increasing revenues, but around half of the countries tracked by the IMF in sub-Saharan Africa are reducing spending. Slow growth is exacerbating fiscal pressures. For the 75 IDA-eligible countries, the rebound from the Covid-19 economic downturn was weaker than for emerging markets – and 2020-2024 has been the weakest half-decade of growth since the early 1990s (Chrimes et al. 2024). Slower growth will make it more challenging to mobilize resources, further squeezing the fiscal space available to governments.

Low tax-to-GDP ratios are limiting the capacity of governments to close financing gaps. On average, tax revenues represent 11.6 percent of GDP in LICs, rising to 14.7 percent in LMICs. Half of all emerging market and low-income countries have tax-to-GDP ratios below 15 percent – a tipping point for accelerated growth and social development (Benitez et al. 2023). While there are some exceptions, tax-to-GDP rates have stagnated since around 2010. The upshot is that governments lack the domestic revenue base with which to close the financing gaps for their SDG targets – and for school feeding.

Raising tax-to-GDP ratios is critical for SDG delivery, but the short- and medium-term potential is limited. IMF research concludes that LICs and LMICs could raise another 5 percent to 9 percent of GDP through more efficient tax systems and institutions – a proposition now enshrined in its Global Public Finance Partnership (*Ibidem*; IMF and World Bank 2024). That headline number belies the

political, economic, and administrative challenges faced by governments in LICs and LMICs. It takes time for countries to strengthen their tax systems, build institutions, enhance tax compliance, and overcome resistance from entrenched interests.

LICs and LMICs may be operating far closer to the frontiers of their resource mobilization potential than the IMF concludes. Evidence from the international research institute ODI Global, drawing on tax data from the United Nations University World Institute for Development Economics Research (UNU-WIDER), suggests LICs could increase tax-to-GDP ratios by only 2.6 percent and LMICs by 4.7 percent. Translated into per capita financial terms, that gap represents around $20 in LICs and $134 in LMICs, reflecting differences in average income. The ODI-UNU WIDER analysis is consistent with broader analysis (Evans et al. 2023). Recent research on the debt and fiscal space in sub-Saharan Africa found that current policies aim at increasing revenue-to-GDP ratios by 1-2 percent of GDP, while identifying further measures that could mobilize a similar amount through deeper reforms. What these figures suggest is that, even with a concerted reform effort, domestic tax is unlikely to mobilize resources on the scale needed to accelerate progress towards the SDGs and climate goals.

2. Domestic financing – "sin taxes", natural resource revenues, and earmarking

An emphasis on innovative finance should not divert attention from the importance of wider public finance reforms. LICs and LMICs (like advanced economies) under-tax wealth and assets, providing wide-ranging exemptions, in many cases aimed at creating corporate investment incentives (Von Haldenwang 2021). The Global Tax Expenditure Database suggests that LICs and LMICs forgo over 2.5 percent of GDP in revenue through the widespread use of tax exemptions (GTED n.d.). Illegal tax evasion and tax avoidance create wider losses. One estimate from the IMF suggests that Africa is losing between $450 million and $730 million annually in the mining sector alone because companies shift profits to low-tax jurisdictions (Albertin 2021a, as cited by Albertin 2021b).

Inefficient and inequitable public spending represents an additional drain on resources. Many studies have documented the scope for getting more out of social sector budgets. In the health sectors of LICs and LMICs, more efficient procurement and administration, as well as stronger preventive and primary health care, could make existing budgets go further (much the same applies to most high-income countries) (OECD 2017). One research exercise puts health sector inefficiency losses at 1-2 percent of GDP (and 10 years of life expectancy in the case of Africa).[5] One of the starkest illustrations of inefficiency and inequity is provided by the general subsidies often applied to food, fuel, and fertilizers. These often account for another 2-3 percent of GDP. Only around one-fifth of the benefits go to the poorest 40 percent, according to the World Bank – a far lower share than for social protection spending.[6]

The introduction and/or strengthening of innovative taxation on "public bads" can support wider tax reforms. The idea of using taxation to finance the costs of responding to, or preventing, the harm caused by specific commodities or production methods is well established. It can be traced back at least to the concept formulated by Arthur Pigou that prices should reflect the cost of the negative effects – the externalities – experienced by people not involved in the immediate market transaction. "Sin taxes" on products such as tobacco, alcohol, and high-sugar, high-fat foods are part of the tool kit for combating public bads. Individuals may over-consume these products because

they attach insufficient weight to the health consequences of current consumption or because of information failures linked to weak regulation of corporate advertising (Gruber and Koszegi 2008; Allcott et al. 2019).

Taxes on sugar-sweetened beverages and ultra-processed foods

Excise taxes on tobacco, alcohol, and sugar-sweetened beverages (SSBs) provide clear health benefits – saving lives and averting disease – and mobilize significant revenues. The Task Force on Fiscal Policy for Health (2019) concluded that large taxes on these products were "essential to reaching the targets set by the SDGs related to ensuring healthy lives, ending poverty, and promoting full and productive employment". While sin taxes are designed principally to limit consumption, they also generate revenues that can be used to respond to the harm caused. One example is the use of revenues from tobacco taxes to finance the hospitals that treat patients suffering from lung, cardiovascular, and other non-communicable diseases linked to smoking.

Taxes on SSBs and unhealthy foods have a special relevance for school children – and for school feeding programs. There is strong, consistent evidence linking SSB consumption to weight gain and increased risk that children, adolescents, and adults become overweight or obese. While childhood overweight and obesity levels in LICs and LMICs are well below the average levels for middle-income and high-income countries, they are rising fast. Several LMICs are already facing the "double burden" of childhood malnutrition and obesity. Children who become overweight or obese in their school-age years are more likely to become overweight and obese adults, raising their risk of type 2 diabetes, cardiovascular disease, dental caries, and osteoporosis. This is an area in which the old public health adage about prevention being better (and cheaper) than cure has a special resonance. By providing children with diverse, healthy, and nutritious meals, school feeding programs allied to wider measures can help cut the transmission of obesity across generations.

Estimating how much revenue innovative excise taxes can raise in LICs and LMICs is difficult. Tax revenues depend on how consumers respond to tax-induced price changes (the price elasticity), the efficiency of tax administration, and the design of tax laws. If tax administration capacity is limited, complex laws can leave loopholes that enable companies to evade or avoid taxes. However, modelling work carried out by the Center for Global Development provides some indication of the potential scale and profiles of tax revenues (Lane, Glassman, and Smitham 2021). Based on simulations developed initially by the Task Force on Fiscal Policy for Health, the modelling estimated how much tax revenues would rise in the near term if developing countries expanded the tax base for alcohol, tobacco and sugar-sweetened beverages.[7] Among the key findings:

- Overall tax revenues in LICs and LMICs could rise by 0.6-0.7 percent of GDP (and 3-6 percent of tax revenues, depending on the country). Translated into financial terms, sin taxes could mobilise an additional $52bn annually - almost five times the annual average cost of achieving the 60% school meal coverage target cited earlier. Prospective revenues from SSBs amount to around $10bn, or roughly equivalent to cost estimates for the 60% target.
- Moving tobacco taxation towards WHO benchmark targets would mobilize 0.24 percent of GDP, considering declining demand.
- Increased alcohol taxation could raise an additional 0.35 percent of GDP in revenue, with related increases in VAT raising the yield.

- SSB taxes would account for under 0.1 percent of the increase in revenue, though that share would rise if the tax were applied to the sugar content of foods more widely. This finding is consistent with wider research that estimates average revenue collection for SSBs at around 0.07 percent of GDP (Powell and Blecher 2024). This is lower than for tobacco and alcohol, reflecting the lower tax rates generally applied, greater price elasticity of demand, and in some cases the narrow scope of taxation.
- Tripling SSB tax revenues could mobilize an additional 0.14 percent of GDP, and perhaps more in LMICs at higher levels of income (and associated higher levels of SSB consumption).

Sin taxes have advantages from a public health perspective and for tax efficiency and equity. Excise taxes on alcohol, tobacco, and SSBs reduce consumption of harmful products, generate revenue, and are easy to implement. For example, international evidence suggests that taxes levied on SSBs lead to a decrease in consumption roughly proportional to the price increase. In other words, taxation that increases prices by 10 percent will decrease demand by an equivalent amount (Stacey et al. 2021). However, such taxes have markedly different effects depending on how they are designed and the degree to which they are passed on to consumers.[8] While there are potential trade-offs between public health goals (i.e. reducing the consumption of sugar) and fiscal policy goals (i.e. raising revenues), evidence suggests that most alcohol, excise, and SSB taxes reduce consumption and increase revenue (World Bank 2020; WHO 2023). Corporate interests often claim the effects are regressive, but the evidence points in a different direction (Hattersley et al. 2020). When factoring in the benefits of consumption changes, the impact of excise taxes on tobacco, alcohol, and sugar-sweetened beverages are progressive, with lower income groups gaining disproportionately (Saxena et al. 2019).

The Philippines provides a striking example of the revenue-generating potential of sin taxes. In 2012, the government introduced legislation raising and simplifying taxes on tobacco and alcohol, with phased increases occurring over several years and the range of taxation expanded to include SSBs. Of the funds mobilized, 85 percent were earmarked for health spending, principally on a national health insurance program for low-income households. By 2015, the national insurance program reached over 15 million poor and near-poor people – triple the number in 2012 (Bredenkamp et al. 2016). Revenues from sin taxes increased over the same period from 0.5 percent to 1 percent of GDP, in turn supporting a sustained increase in health financing.[9] The Philippines experience illustrates the wider potential of well-designed excise taxes to simultaneously reduce consumption and increase revenues.

BOX 1. Sin taxes and health financing in the Philippines

The experience of the Philippines illustrates the critical role of evidence, advocacy, and political leadership in driving change. In the face of concerted opposition from a powerful tobacco lobby, reformers were able to secure legislation – the 2012 Sin Tax Reform Act – that set in train the transformation of national health financing. What made the change possible?

An incoming government and wider democratization created an enabling environment. President Benigno Aquino had promised that if he were elected, he would expand health care without raising taxation. The tipping point, though, was a sustained campaign led by a civil society coalition called Action for Economic Reform. Bring together health professionals, economists, researchers, and respected political figures, the campaign developed a public information and media engagement strategy aimed a countering the tobacco lobby, while lobbying of the executive and Congress directly.

Recognizing the government's opposition to tax increases, the coalition reframed the debate by focusing on the restructuring of the complex tax measures applied to tobacco and alcohol. The policy objective became the introduction of a unitary tax system with automatic adjustment for inflation – an approach supported by the World Bank. Establishing a direct link from the proposed tax reform to the Universal Health Care Program – a priority for the new government – gained political traction and built public support.

The 2012 legislation put in place foundations that have been strengthened over time. Under the initial legislation, 80 percent of the incremental revenues from the 2012 sin tax were for spending on health. Further increases in taxes on alcohol and tobacco were introduced in 2018 and 2020, along with new taxes on SSBs. Half of the revenues from the tax on SSBs are earmarked for health spending. Wider levies on government revenues from gambling have also been earmarked for the Universal Health Care program. These tax revenues have helped increase coverage of the National Health Insurance Scheme from 52.6 percent of the population in 2011 to 89 percent in 2022.

Sources: (Iii 2024; Bredenkamp et al. 2016; 'Sin Tax Reform and Revenue Raising for Access to Healthcare in the Philippines' n.d.).

Taxes on SSBs are now globally ubiquitous. These beverages are among the leading sources of sugar intake in many countries, while offering little-to-no added nutritional value. National taxes on SSBs are now in place in 119 countries, supplemented in some cases by sub-national taxation. Over 80 percent of people in Latin America, sub-Saharan Africa and South Asia live in countries with a national SSB tax of some form, including two-thirds of the population of LICs and three-quarters in LMICs.[10]

The effects of SSB taxes depend on how they are designed and implemented. Excise taxes can either be applied as a percentage of the value of a beverage (ad valorem) or as a monetary value proportional to the volume (volume-based specific) or the sugar content of a beverage (sugar-content-based specific). Some countries combine two of these types in one system. Others – including India – implement SSBs through VAT or general sales taxes. Ad valorem taxes have the advantage of not requiring adjustment for inflation, along with several disadvantages. They are less effective in dissuading consumers from buying cheaper products and choosing alternative products, and they

are prone to corporate tax avoidance (such as under-reporting taxable values). Evidence suggests that the most effective design from a consumption perspective are specific excise taxes applying to all beverages containing sugars, since these are more effective in targeting cheaper products, less vulnerable to tax avoidance, easier to administer, and generate more significant revenue streams. Ensuring that taxes are automatically tied to consumer price inflation data can ensure that the tax effects are not diluted over time. Over half of tax regimes apply tiered rates, with levies escalating with sugar content. In the case of LICs and LMICs, taxes are widely applied to all bottled drinks, including unsweetened water, suggesting a weaker public health orientation (Hattersley and Mandeville 2023).

Revenue levels depend on tax design. While beyond the scope of this report, tax design has a critical bearing on revenue flows. Relevant factors include the degree to which the tax is passed through to consumers, demand effects, and whether or not the tax creates incentives and opportunities for manufacturers to reduce their tax liability by reformulating products. South Africa's Health Promotion Levy introduced a 10 percent tax on SSB but included incentives for manufacturers to reduce liability by reducing sugar content below specified thresholds. It generated around 0.05 percent of GDP in revenue, with the supply response and falling demand reducing revenues over time. By contrast, in Mexico a volumetric tax on all beverages containing sugars that provided no incentives for manufactures to shift product design generated revenues equivalent to 0.07 percent of GDP.

Many LICs and LMICs may be under-taxing SSBs, with damaging effects for public health and government revenues. Ad valorem taxes dominate SSB excise in most LICs and LMICs. Evidence from the WHO suggests that the affordability of soft drinks measured as a proportion of income has increased in most countries over the past three decades, with the most rapid increases in LICs and LMICs (WHO 2023). While overall SSB sales volumes over the past two decades have been falling in high-income countries (albeit from a high baseline), they have been rising in LICs and LMICs. Per capita sales volumes have rising sharply in East Asia and sub-Saharan Africa. While higher income countries tend to tax unhealthy products, many LICs and LMICs apply untargeted taxes, again suggesting a weak link to public health goals.

Powerful corporate interests have a lengthy and highly effective track record in opposing SSB taxes. Industry lobbies have sought to block, weaken, or delay legislation using a mix of disinformation, advertising, and financial support for legislators, officials, and political leaders willing to back their cause. In Colombia, industry lobbies – including the Coca-Cola Company – first sought to lower the sugar taxation thresholds and then challenged the constitutionality of the reforms. Conversely, public health lobbies have proven highly effective at building public support for health taxes. Research from Colombia, Ghana, Pakistan, and South Africa, all of which have recently adopted wide-ranging SSB taxes, shows how advocacy can counter legal attacks, support public information campaigns, and build coalitions for reform.[11]

SSB taxes address just one aspect of unhealthy diets. The global shift towards "Western diets" marked by high levels of sugar, fat, and carbohydrates has been accompanied by the steady rise of ultra-processed foods. These foods – encompassing a broad range of ready-to-eat products – contain industrial formulations, additives, chemical modifications, and in many cases high sugar and fat content. Their growing profile in global diets is reshaping food systems, harming public health. Increased exposure to ultra-processed food is linked to heart disease, type 2 diabetes, and obesity (Lane et al. 2024).

Colombia has set an important global precedent with the introduction of a tax on ultra-processed foods. In 2023 Colombia adopted legislation to tax ultra-processed foods, broadly defined as products formulated from food-derived substances, along with additives, that contain sugars, sodium, and saturated fats above specified thresholds. The legislation also includes taxes on sugary drinks, with tax rates escalating as sugar content rises. The tax rate on ultra-processed food will rise on a set schedule from 10 percent in 2024 to 20 percent in 2025. Various exemptions have been included for traditional foods that figure prominently in the food baskets of the poor. The government estimates that the tax will generate $750 million in revenue in 2025, which would represent an increase of around 10 percent in tax receipts.

Earmarking tax revenues

The earmarking of revenues is highly contested in debates on public finance. Earmarking is the practice of assigning revenues from specific taxes to specified areas of public spending. The case against earmarking has overwhelming support from public finance economists, who cite a litany of objections. These range from concern over the rigidity it introduces into budget planning, including "lock-in" effects that tie the hands of future governments; the erosion of legislative authority and scrutiny; inefficient resource misallocation; and fungibility – the fact that all tax revenues are ultimately interchangeable. Additional constraints include the volatility of tax revenues, the difficulties of aligning projected revenues with optimal financing, and the impossibility of verifying whether government commitments have led to changes in the allocation of spending.

Advocates for earmarked funding turn the arguments of critics on their head, interpreting the flaws they highlight as strengths rather than weaknesses. Locking-in public spending, so the argument runs, can help provide continuity across political cycles and protect budgets. Another important strand in the case for earmarking is its potential to overcome public resistance to tax increases by highlighting the direct link between revenue and benefits (McCleary 1991). The ubiquitous presence of earmarking in national tax structures provides some support to their arguments. Earmarking is used to finance health care in both the United States (Medicare) and the United Kingdom (the National Health Service). Earmarking is also widely used in sub-Saharan Africa. In Ghana, part of the revenue from VAT and the national fuel levy is earmarked for health and education spending (Adisah-Atta 2017). Across Africa, excise taxes on tobacco and alcohol are variously assigned to health, antiretroviral medications, and national insurance (Nabyonga-Orem 2023; Bird and Wallace 2010). Several governments have adopted electronic transfer levies – so-called "E Levies" – to support health and wider public investment goals. For example, Kenya sets aside 16 percent of the revenue collected on digital money transfers to support universal health care (Abounabhan et al. 2023).

Currently, earmarking of revenue from SSB taxes is less common than earmarking of tobacco tax revenue. A global review by the WHO found only nine cases of earmarking SSB taxes (and only four in LICs and LMICs).[12] In some cases, as in South Africa, this reflects a general policy orientation against earmarking (Ozer et al. 2020). That does not explain the wider picture, however, as at least 80 countries have some form of earmarking in health. There are exceptions to the wider rule against SSB earmarking. The most notable is the Philippines, where half of the revenue from SSBs is assigned to health (Box 1). Uganda earmarks all revenue from its SSB tax for a fund targeting treatment of HIV/AIDS, and Rwanda and Tanzania also earmark for health financing (Nabyonga-Orem et al. 2023). In some cases, such as Mexico, earmarking provisions for health financing appear not to have been implemented for SSBs, with the revenue being directed into the general budget (Martinez Valle 2020).

While earmarking for school feeding in an exception to the rule of financing from general revenues, some countries do assign specific revenues through legislation. Since 2005, Bolivia has assigned shares of revenue from the Direct Tax on Hydrocarbons to municipalities for financing education, health, and social services, including the Complementary School Meals program (CSM). The tax finances 70 percent of the program, which reaches over 2.5 million children enrolled in pre-primary, primary, and secondary public schools (Sustainable Financing Initiative for School Health and Nutrition, Bolivia 2022). In Guatemala, the School Feeding Program, which is also universal for all children enrolled in public schools, is fully financed from VAT revenue lines stipulated in national legislation (Sustainable Financing Initiative for School Health and Nutrition, Guatemala 2022). The full school meals budget represents just under 1 percent of total VAT receipts. India's PM-Poshan school feeding program, the world's largest, is part financed by revenue allocated from a national education "cess" – a 4 percent levy on basic income and corporation tax. In the United Kingdom, municipal authorities in London initially financed a universal meals program for primary schools by earmarking revenues from business rates (Greater London Authority 2024).

Some countries have assigned revenues from special levies to social sector financing. One example comes from education. Some training programs are funded by innovative levies from diverse sources such as a withheld percentage of the payroll; company profits, turnover, or sales; taxes or fees on foreign worker permits; or a fixed-rate payment from each employee. As of 2020, various kinds of training funds financed by levies existed in 75 countries (UNESCO 2022). In 2000 the government of Ghana faced heavy opposition to an increase in VAT from 10 percent to 12.5 percent. To secure public acceptance, it committed all the new revenues to an Education Trust Fund, designed to finance scholarships and educational infrastructure. (Welham et al. 2015).

There is a case for earmarking SSB taxes and wider ultra-processed food taxes to school meals. The best option for school meal financing is to ensure that it is prioritized in the general budget. However, while earmarking may not be the most efficient way to allocate public funds and organize budgets, it could help governments make – and win – the case for increasing taxation to finance national development priorities. Establishing a link to school feeding has several advantages. It offers a direct and highly visible bridge from a public bad (dietary habits associated with obesity) to a public good (healthy diets for school children, which can shift consumption patterns). From a political perspective, school feeding can generate a wide range of benefits, boosting food security, education, health, and social protection, making it an attractive option for governments seeking to build a social contract and demonstrate results, while getting more out of limited investment resources.

Soft earmarking and linking school feeding to wider agendas can allay some of the concerns identified by public finance economists. Earmarking taxes creates budget risks as well as opportunities. Revenues may fall short of (or exceed) expectations, reflecting wider economic cycles. Moreover, governments may use earmarked revenues to substitute for, rather than add to, general budget revenues – an illustration of the fungibility problem. One way of lessening these risks is to broadly align earmarked taxes with wider budget priorities – an approach labelled "soft earmarking" (Cashin et al. 2017).

The politics will outweigh the economics. Governments seeking to expand SSB taxation are likely to face entrenched opposition from powerful food industry lobbies. Countering that opposition will require careful groundwork in building coalitions, developing narratives, and winning over the public. Advocates for school feeding can help by projecting school feeding as part of an integrated strategy for achieving wider poverty, food security, health, and education goals enshrined in national budgets.

Converting natural resource wealth into human development investments

Revenues from natural resource wealth could finance a sustained expansion of school feeding. Substantial recent discoveries of natural resource wealth have been made in several countries in sub-Saharan Africa. Over half of global petroleum discoveries since 2010 have occurred in the region, along with substantial finds of natural gas and rare minerals. It is estimated that natural resource rents account for 9 percent of Africa's GDP. Historically, these rents have been associated with high levels of corruption, slow economic growth, conflict, weak tax systems, and a limited trickle down of benefits to the wider population – symptoms of what has been labelled a "resource curse". Investment in social sector priorities – including school feeding – could help convert that curse into a catalyst for accelerated human development. Several countries – Bolivia, Botswana, and Indonesia among them – have demonstrated that natural resource wealth can play a positive role.

The political economy of natural resource wealth management matters. Underlying political conditions shape the governance of resource wealth. Symptoms of the resource curse are likely to be most intense in countries where political office is seen as a "winner takes all" opportunity to secure short-term, private gain rather than promote long-term social development. The antidote to the curse includes a political elite with a commitment to national development priorities that transcend political cycles, allied to the presence of civil society organizations spanning broad social groups and causes. In Botswana, the Sustainable Budget Index and wider budget rules stipulate the share of wealth from diamonds that is directed to physical and human capital investment and the share saved for future generations through a sovereign wealth fund.

The wider debate over earmarking is relevant for resource wealth governance. In countries where resource rents represent a large but volatile share of government revenues, rigid earmarking can magnify the distortions associated with under-investment, over-investment, and unpredictability. That is why Botswana limits the share of resource wealth going through recurrent spending in the national budget. In more decentralized systems, earmarking can also lead to tensions between national and sub-national governments over priority setting. However, given the history of the resource curse, earmarking or hypothecating funds can help enhance public trust, strengthen accountability, and align spending priorities with public concerns.

Research by ODI Global has explored the potential role of natural resources rents in financing school meal programs in three countries – Mozambique, Senegal, and Tanzania. Each of these countries has significant prospective and/or current government revenues from hydrocarbon exports. Current school meal coverage is limited (Box 2) and there are strong grounds for scaling up. Learning outcomes are generally poor. High levels of stunting among under-5s suggest that many children are entering school with under-nutrition. And large numbers of children are out of school. School feeding has a proven track record in improving all these areas. Potential revenues from hydrocarbons exceed the estimated cost of providing universal coverage of school meals in Senegal and Tanzania and represent around one-third of the cost in Mozambique.

Table 1. How hydrocarbons could pay for school feeding

	Potential revenues from hydrocarbons (percent of GDP)	Revenues (per capita $)	Estimated cost of school feeding (Share of GDP)
Mozambique	0.4-1.5	20-82	2.8
Senegal	3-5	45-70	0.6
Tanzania	1.5	20-30	1.3

Source: Technical Background Paper: Prospects of earmarking Africa's oil and mineral revenues for sustainable school feeding programmes, by Olha Homonchuk and Tom Hart. ODI Global (2024) estimates

Senegal is well placed to finance an expansion of school feeding through hydrocarbon revenues. Previous governments committed to develop a national school feeding program but failed to translate policy pledges into budget provisions. Over 80 percent of what remains a limited program is funded by donors. Primary education indicators point to an urgent need for investments aimed at reducing the dropout rate –40 percent of the children entering primary school subsequently drop-out. Only 13 percent of those in school achieve minimum proficiency in reading, and there are high levels of inequality linked to wealth and a rural-urban divide. The new government led by President Bassirou Faye was elected in April 2024 on a platform that included a commitment to ensure that hydrocarbon wealth was distributed more widely through public spending.

In Tanzania the development of hydrocarbon revenues and debate over their use was delayed by political turmoil and a drift towards authoritarianism. That picture has started to change under the current government of President Samia Hassan. Social spending budgets have increased, and the government has demonstrated a strong commitment to education. The picture on school feeding is mixed. While there is normative commitment to school feeding there is no national budget, reflecting a presumption that parents should finance school meals. However, in 2022 the government joined the School Meals Coalition and pledged to expand public programs. Earmarking natural resource revenues for school feeding would likely garner strong public support, as recent deliberative democracy surveys indicate that Tanzanians overwhelmingly favour allocating these funds to health and education. There is also strong evidence that school meals improve enrolment, attendance, and sometimes learning outcomes (Ash et al. 2003; Chaula 2015; Lukindo 2018).

Mozambique illustrates the risks associated with the resource curse and the opportunities for breaking the curse. The country is endowed with abundant natural resources, including offshore gas. Unfortunately, control over resource rents has figured prominently in armed conflict and an Islamic insurgency, and prospective gas extraction revenues were used as collateral to secure a $2 billion loan from Swiss and Russian banks. So far, the benefits of natural resource rents have been directed mainly towards elites in the form of subsidized power and lucrative contracts through the public electricity company. This picture is starting to change. New governance rules provide for 40 percent of resource revenues to go into the national budget, with the remainder allocated to a sovereign wealth fund. While there is no national budget for school feeding, hydrocarbon revenues could provide a basis for establishing one. Implementing a school meals program could serve as a constructive step towards mending the strained relationship between the government and its citizens, particularly in allaying public mistrust surrounding the fair use of oil revenues.

While national political conditions will dictate prospects for using hydrocarbon revenues for school meals, some broad principles can help steer constructive approaches. The governance of natural resource revenues demonstrates the limitations of reform approaches based on technical theory rather than applied political economy. The very different development trajectories of Botswana

and Nigeria illustrate this point. However, Mozambique, Senegal, and Tanzania show how reform options could unlock new finance for human development priorities, including school meals. Among the key conclusions to emerge:

- ***The window of opportunity is closing.*** As the green transition gathers pace in wealthier countries, hydrocarbon revenues are likely to shrink. The next 5-10 years may represent a last chance to use natural resource wealth to improve people's lives.
- ***Don't treat school feeding as a stand-alone intervention.*** School meals should be seen as one element in an integrated public finance response to the climate, green transition, health, and education challenges facing governments. Positioning school meals as a linchpin connecting health, education, social protection, and food system reform is likely to gain greater political traction.
- ***Establish school feeding as a general budget line.*** In the absence of a general budget line, increased revenues from hydrocarbons are likely to bypass school feeding.
- ***Earmarking natural resource wealth can help build trust and accountability.*** The case for earmarking is political, not economic. In countries where the resource curse has eroded public trust and fuelled conflict, assigning revenues to areas that spread benefits widely may strengthen credibility.

BOX 2. The current state of school feeding in Senegal, Tanzania, and Mozambique

Senegal: Current school feeding coverage is limited. Only around 20 percent of children in school receive school meals, mostly through non-government provision. In 2021, as part of its Covid-19 response, the government introduced a program supported by the Global Partnership for Education and WFP, targeting areas with high levels of deprivation. Government spending on school meals is limited (it was under $1 million in 2021), but school meals are integrated into national policy frameworks for social protection, health, and education. While Senegal has one of Africa's highest ratios of education spending to GDP, the budget is heavily skewed towards tertiary education with limited support for basic education (where the school meal program is housed).

Tanzania: There is currently no national school feeding program in place, though the government does supplement the donor finance behind a community-led program that now reaches 7 million children out of 16 million enrolled. Various policy documents express a commitment to the principle of providing school meals, including National Guidelines adopted in 2021. The policy documents also stipulate a commitment to home-grown school feeding. However, they presume that parents will meet the full cost of school meals and participation by schools is voluntary.

Mozambique: Mozambique National School Feeding Program (PRONAE) was approved by the Council of Ministers in 2013 but was never incorporated into the national budget. In 2017, WFP facilitated a debt swap that release $40 million in scheduled debt servicing for school meals over five years. Currently, around 300,000 children of the 9 million enrolled in school receive meals through WFP support for PRONAE and a complementary Home-Grown School Feeding (HGSF) programme.

Source: Technical Background Paper: Prospects of earmarking Africa's oil and mineral revenues for sustainable school feeding programmes, by Olha Homonchuk and Tom Hart. ODI Global (2024)

3. International cooperation and innovative finance

Several significant innovative finance instruments have emerged through international cooperation. Many of these instruments date back to the early 2000s and earlier, though they have evolved to reflect changes in the economic environment and new approaches. The benchmark for assessing any approach to innovative finance is the impact in mobilizing new and additional resources that drive results. We apply that criterion in considering the relevance of innovative finance approaches to school feeding programs. The time horizon also matters. If the aim is to significantly expand the reach of school feeding by 2030, new capital investment will be needed immediately, alongside a commitment to recurrent spending.

In international cooperation, as for domestic resource mobilization, "conventional finance" remains critical. Just as no amount of innovative finance in domestic resource mobilization will displace the need for efficient and equitable tax systems, no amount of innovation in international finance will substitute for affordable international public finance delivered through bilateral aid and multilateral development finance. In many cases, such as blended finance initiatives, increased public finance is likely to remain a condition for mobilizing innovative finance.

Leveraging the multilateral system

Financing for school feeding cannot be separated from the wider agenda for financing an SDG recovery. While they are beyond the scope of this report, innovations in approaches to financing for the MDBs – and investment more broadly in SDGs with a connection to school meals – will be critical. Approaches to school meal financing could also usefully draw on lessons from multilateral funding mechanisms.

The MDBs could play a far greater role in financing for school meals. MDBs occupy a pivotal position in SDG financing. They are the most effective institutions for mobilizing low-cost, long-maturity, affordable finance. They also represent vast repositories of development knowledge, grounded in engagement with governments, research, and experience. These assets are insufficiently leveraged for the SDGs. The G20 Independent Working Group on strengthening the MDBs has called for the mobilization of an additional $500 billion in development finance by 2030, half of it through the MDBs (The Independent Expert Group 2023). This includes tripling the World Bank's International Development Association (IDA) facility, which is the largest source of development finance for LICs and LMICs.

Unlocking MDB finance will require more innovative governance. The MDB reform agenda spans two broad areas. The first involves squeezing more finance out of current balance sheets through the use of hybrid capital (the use of finance that serves both as a capital assets and as a lending resource) and recycled Special Drawing Rights. At the same time, less conservative approaches to risk and lending are needed, and regulatory reforms that enable the MDBs to make greater use of the guarantees – or "callable capital" – provided by their shareholders. Greater use of risk guarantees made available through the international public finance offered by MDBs will also be vital for mobilizing private capital investment (see below). Speeding up the pace of project delivery and strengthening MDB coordination will also be important. The second reform area will require new injections of capital by major shareholders; these are urgently needed to mobilize resources at scale. Lending through the MDBs is one of the most efficient ways of using development finance because of

their ability to mobilize cheap finance in debt markets, and because they can lend at a ratio of $4-5 for every $1 on their balance sheets. While these issues go far beyond financing for school meals, they have a critical bearing on the enabling environment in which LIC and LMIC governments operate.

The International Financing Facility for Education (IFFEd) offers powerful multiplier effects for multilateral finance. IFFEd was designed to bridge the chronic financing gap for education in LMICs that lack access to affordable international development finance. Each portfolio includes paid-in capital to finance risk guarantees and grants to subsidize loans at interest rates well below those on offer in standard MDB lending operations (IFFEd n.d.). Briefly summarized, IFFEd uses guarantees financed by donors to underwrite risks in MDB loan portfolios, effectively enabling institutions like the World Bank and the regional development banks to raise more capital on international markets and lend more. Donors need to pay in less than the amount guaranteed (around $0.15 for every $1 in guarantees), amplifying their financial contribution. Because MDBs themselves can lend $4 for every $1 they raise, the arithmetic generates an impressive multiplier effect: $40 million in paid-in risk guarantees can underwrite new MDB borrowing of $250 million and lending of $$1 billion – a leveraging ratio of 27. While standard bilateral aid operations generate a 1:1 ratio of grants to overall finance, a donor commitment to provide the $40 million in risk guarantees and $100 million in grants can multiply the transfer by a factor of 7. IFFEd has secured risk guarantees from Canada, Sweden and the United Kingdom. Established as an independent foundation registered in Switzerland, in 2024 IFFEd received an "AAA" credit rating and announced its first major program with the Asian Development Bank.

Directing grants and paid-in capital through IFFEd may be one of the most effective ways to leverage MDB finance for school feeding. Donors are unable to duplicate the multiplier effects of support for IFFEd through bilateral aid programs or trust funds housed in the MDBs. Including school feeding in IFFEd's remit and offering support through aid and philanthropic capital would have the triple benefit of providing affordable finance for governments seeking to expand school meals, creating incentives for MDB engagement, and delivering early results.

Some countries have turned to innovative debt instruments to finance social sector investments. Global markets for "green bonds" and wider "sustainable finance bonds" have grown rapidly over recent years. Many developing countries have entered the market with bond issues tied to the SDGs or climate goals. The list includes several middle-income countries (including Indonesia, Mexico, and Uzbekistan) and a low-income country (Benin) which have issued SDG bonds, earmarking revenues against specified areas of social spending, potentially including school feeding. For example, Benin's $500 million bond issue in 2021 includes a wide range of eligible areas, including health and education. On the global stage, the World Bank has emerged as one of the largest issuers of green and social bonds.

While sustainable finance bonds have made a difference at the margin for some countries, the net benefit is uncertain. In a $1 trillion market for green and social bonds, only around 1 percent of the issues originate in LICs or LMICs. There is no clear evidence that these bond issues have increased the affordability of finance – and there are significant risks associated with sovereign bond issues. Another concern relates to the fungibility of bond revenues. In practice it is inherently difficult to track whether debt-financing through bond revenues increases the overall budget envelope for SDG financing, though budget tracking can help provide a degree of transparency (Boutron et al. n.d.). On the basis of the evidence available, it is difficult to make a case for school meal financing through sustainability finance bonds.

Sustainability-linked bonds (SLBs) illustrate the limitations of innovative finance in sovereign bond markets. SLBs emerged recently but are now widely issued both by private companies and governments. Unlike green bonds and SDG bonds, under which spending is nominally stipulated and monitored, SLBs do not earmark revenue. Bond issuers are only required to meet some pre-determined performance indicators typically measured against climate and wider ecological benchmarks. In 2023, $66 billion in SLBs were issued but the market has stagnated (Cochelin et al. 2024). One probable cause has been summarized by Standard and Poor, the credit-rating agency: "A high probability of an issuer meeting targets combined with low consequences for missing them may mean some investors see SLBs as no different from standard, unlabelled bonds" (*Ibidem*).

Lessons from the global health funds

There may be lessons to draw from the experience of the two major global health funds. Gavi, the Vaccine Alliance, was established in 2000 and the Global Fund to Fight AIDS, Tuberculosis and Malaria in 2002 to recalibrate an aid system unfit for the purpose of tackling major global health problems. They are both independent public-private partnerships. The two funds have contributed to sustained increases in aid for health. The Global Fund raises and invests around $5 billion annually. Donor contributions for Gavi's 2021-2025 strategy period are reported at $21.6 billion.

Several aspects of Global Fund and Gavi operations provide a counterpoint to the challenges associated with school feeding. International cooperation on school meals is marked by very low (and stagnating) levels of aid, reflecting in turn the limited visibility of school feeding on the international development agenda. Coordination between donors is weak to non-existent. Aid flows and volumes reflect the priorities of individual donors, rather than a joined-up approach to the global challenge of extending the reach and improving the quality of school meals. There is little or no recourse to innovative finance. Technical support aimed at building national self-reliance is fragmented. Justifiably or otherwise, the investment case appears to many donors unpersuasive. The multilateral health funds are at the other end of the strategic scale:

- ***Annual replenishment exercises*** have provided a focal point for national and international advocacy to mobilize resources. Both funds provide powerful human evidence of impact. For example, Gavi reports averting 19 million deaths since 2000 and $21 in benefits for every $1 invested (Gavi, The Vaccine Alliance 2024).
- ***Coordinated technical support,*** with both institutions working through national governments and civil society organizations. In the case of the Global Fund, national plans are developed through a Country Coordination Mechanism bringing together key actors, from national ministries to civil society organizations, professional bodies, and community organizations. The plans are assessed by technical committees, with performance monitored by a Local Fund Agent. Gavi's Independent Review Committee assesses national plans and authorizes funding.
- ***National financing contributions*** encourage self-reliance. Both global health funds aim at increasing national financing over time, with the ratio of domestic budget and international finance determined by formulae. For example, Gavi envisages a transition to full domestic financing over an eight year "acceleration period' (Gavi, The Vaccine Alliance n.d.). Once countries reach a specified average per capita income threshold (currently $1,815) they are expected to cover around one-third of program costs. The business model has the effect of mobilizing domestic budget commitments and reducing aid dependence over time.
- ***Governance structures*** bring together governments, UN agencies, international finance institutions, philanthropists, and civil society, both at a country level and internationally, creating opportunities for alignment behind strategic plans.

- ***Innovative finance*** features prominently in the portfolios of the global health funds, both have which have pioneered new approaches (Box 3).
- ***Well-defined strategic goals*** set out the collective purpose uniting agencies involved in the health funds. Both funds have set clear goals and corresponding targets backed by a compelling investment case. For example, the Gavi 2025-2030 strategy aims to reach 300 million children, with a distinctive focus on "zero dose" children in hard-to-reach areas.
- ***Resources are aligned behind strategic purpose***, not individual donor preference. Neither Gavi nor the Global Fund allow donors to earmark funds for specific countries. Allocation criteria are determined by transparent benchmark criteria, including per capita income, vaccination levels, and the number of zero dose children.

BOX 3. Innovative finance in the global health funds

From their inception both global health funds have made extensive use of innovative finance instruments. The resulting revenue flows supplement a diverse donor base dominated by bilateral donors and philanthropic capital.

Innovative financing accounts for around one quarter of Gavi funding. Among the main instruments:

- ***IFFIm bonds.*** The International Finance Facility for Immunisation (IFFIm) was created in 2006 and uses donor funding commitments to back the issuance of special bonds in capital markets, essentially providing "up-front" financing to Gavi. By issuing bonds guaranteed by donors Gavi has been able to raise low-cost capital and front-load investment. Vaccine bonds have raised around $8.7 billion to date and contributed 17 percent of Gavi's vaccine funding, playing an important role in the development of social bonds
- ***The Advance Market Commitment (AMC).*** Introduced as a market-shaping mechanism, the AMC aimed at spurring accelerated access to pneumococcal vaccines through up-front funding commitments from donors. The focus of the AMC was on the developing and reducing prices for a vaccine for pneumonia, the biggest single killer of children under 5 years of age, through forward contracts with pharmaceutical manufacturers,
- ***Matching Funds.*** The Gavi matching fund is designed to encourage private investment by matching commitments with equivalent donor finance, creating a multiplier effect.

The Global Fund also uses a range of innovative platforms. Debt swaps have figured prominently. The Debt2Health program has provided creditors with a vehicle for converting debt into investment on Global Fund programs. For example, Germany's $700 million pledge at the fifth replenishment conference in 2016 included a $100 million debt swap contribution. To date there have been 12 Debt2Health transactions involving three donors (Australia, Germany and Spain), generating $226 million in health funding for 10 debtor countries (The Global Fund n.d.). Another initiative – (RED) – imposing a small levy on sales by major corporate brands has opened the door to revenues from the business sector, mobilizing $760 million. Blended finance approaches have enabled the Global Fund to leverage investment from international financial institutions and philanthropic foundations. For example, an anti-malaria program in Central America has secured additional financing from the Inter-American Development Bank, the Carlos Slim Foundation, and the Gates Foundation ('Innovative Finance' 2022).

The operations of the global health funds continue to generate debate. Advocates rightly point to the extraordinary achievements of the Global Fund and Gavi in preventing and treating diseases and saving lives. Critics have raised concern over the way in which the scale of the two funds can have the effect of skewing national priorities. That concern is also justified. These issues, familiar from the wider debate over "vertical versus horizontal" funding, have increasingly been overtaken by events. Gavi and the Global Fund have over time strengthened their focus on health system development, while horizontal funders – such as the MDBs – finance many specific interventions that might be counted as "vertical" in nature.

Establishing new global funding mechanisms can be thought of as a form of innovative finance, though the approach is not new. The International Fund for Agricultural Development (IFAD), the oldest global fund, was created in 1978. In the first decade of the 2000s, new funds proliferated in health and education, and the climate crisis has added a new impetus. While the health funds pass the litmus test of having mobilized new and additional financing, the wider picture is less certain.

The success of the global health funds has prompted proposals for the creation of new innovative international financing mechanisms in areas relevant to school feeding. One example is the Zero Hunger Alliance and Fund proposed by the UN Food Systems Summit Scientific Group. This advocated a $2 billion global fund as part of a wider public-private resource mobilization effort, including a $13 billion reallocation of Special Drawing Rights to create a financing vehicle to guarantee interest payments of "zero hunger bonds" capped at agreed maximum rates (Díaz-Bonilla 2021). The proposed remit included a wide range of interventions in agriculture, health and nutrition. There have also been proposals aimed at creating a global fund for social protection. Once again, the proposed remit is very broad, encompassing a wide range of human rights and labour standards with an "intersectional approach to gender and social equality, addressing multiple axes of disadvantage and discrimination to ensure inclusiveness" (Yeates et al. 2023).

Current global funds have a mixed record in mobilizing new finance. Creating new global funding mechanisms is not an automatic route to resource mobilization or enhanced impact. Replenishments of the Global Partnership for Education (GPE), the major multilateral education fund, have not significantly increased aid financing for education. The Global Agriculture and Food Security Program (GAFSP), housed in the World Bank as a financial intermediary fund, was created in the wake of the 2007/2008 food crisis to improve nutrition and food security in the world's poorest countries. This was envisaged as part of the architecture aimed at delivering on a $22 billion G7 donor pledge. However, the GAFSP has typically disbursed no more than $50-100m annually. The Global Financing Facility, also hosted in the World Bank as a multilateral trust fund, was launched at the International Conference on Financing for Development in Addis Ababa in 2015, to accelerate progress on child and maternal health. To provide an indication of actual scale, between 2021 and 2023 the GFF disbursed $75-80 million annually through three to five country grants (Global Financing Facility 2024). While the GFF also claims to leverage large flows of IDA money, this is difficult to substantiate in practice.[13] It remains to be seen whether a recently created Child Nutrition Fund housed in UNICEF and dedicated to achieving the SDG targets on child wasting will have a greater financing impact (Bill & Melinda Gates Foundaton, et al. n.d.).

Several broad conclusions for school feeding can be drawn from the experiences of global funds. The first is that making the case for a new dedicated, independent institutional entity is likely to prove futile – doubly so if the objective is to drive transformative change by 2030. The current multilateral climate is not conducive to the creation of new funds. International advocacy for school

meals is muted at best and unlikely to generate the urgency associated with the creation of the global health funds, the climate crisis, and other issues. Moreover, as the experiences summarized above attest, most global funds have not reconfigured the funding environment. Current global funding mechanisms also suffer from fragmentation, high transaction costs, and weak coordination.

There may be some merit in considering a "virtual fund" approach designed to achieve greater impact. International development financing for school feeding is stuck in a low-level equilibrium. International development assistance is chronically under-financed, poor coordinated, and lacking in strategic direction. Multiple agencies, including the GPE, GAFSP, bilateral donors, and MDBs, operate what are – in all but name – small-scale project portfolios. With limited technical support in place, donors lack a vehicle for scaling up finance and demonstrating impact – key conditions for the success of the global health funds. Platforms for innovative finance are under-developed. New institutional structures bringing together governments, donors, MDBs, UN agencies, philanthropists, and civil society could change this picture. The key actors are already loosely connected in the School Meals Coalition, which could provide an institutional foundation.

While the international development agenda is a crowded marketplace, school feeding does meet many of the criteria for a concerted international effort to mobilize new resources. Hunger and poverty among children are causes with the power to cut across polarized political boundaries. There is compelling evidence of the benefits of school feeding for nutrition, health, education, and food security. The size of the current funding gaps suggests that a rapid scale-up of school meals is both affordable and achievable. In all of these senses, the broad conclusion drawn by researchers at the Brookings Institution on vertical funds would appear to apply: "[These] funds do best when they are oriented towards a specific time-bound goal to expand access to key technology systems for an issue deemed so important that it requires large-scale dedicated financing. They are also effective when they innovate by mobilizing significant new financing; by introducing cogent new forms of multistakeholder governance; by fostering internal and external learning through transparent data circulation and applied research […]"[14].

Converting debt into human development investments

The scale of the debt crisis facing LICs and LMICs also represents an opportunity to mobilize public finance for key social sector investments. On some measures, the debt burden now facing developing countries is the worst in the modern era.[15] At the end of 2023, the IMF had classified 24 LICs and LMICs at high risk of debt distress with a further nine already in debt distress. Of 68 IDA-eligible countries, just seven were classified at low risk of debt distress. Countries eligible for IDA loans were scheduled to spend $89 billion servicing external debt in 2023, with a steep rise in Eurobond payments in 2024 and 2025. On average, repayments absorb around 16 percent of government revenue, rising to over 25 percent for 20 countries (World Bank 2024a). These transfers to creditors exceed spending on health, primary education, and social protection, diverting resources urgently needed to support an SDG recovery.

An obvious inference is that spending less to service what for many countries are unpayable debts could release finance to spend in critical social areas, including school feeding. This is what happened under the Heavily Indebted Poor Countries Initiative, under which debt reduction led to increases in social sector spending averaging 1-2 percent of GDP.

Domestic debt is part of the wider crisis. Although international attention rightly focuses on external debt, the fiscal space available to government is heavily influenced by domestic debt. Faced with mounting external debt obligations, slower growth, lower-than-expected tax revenues, and Covid-related spending demands, governments have increasingly turned to domestic debt to finance public spending. In 2023, the new Development Finance International (DFI) Debt Service Watch database showed that total public debt service (domestic and external) was equivalent to 38 percent of budget revenues on average across 139 countries of the Global South. In low-income countries the figure was 57.5 percent; in IDA-eligible countries it was 48 percent.

The evolution of the debt crisis over the past decade has an important bearing on approaches to debt relief. Confronted with limited access to affordable development finance in the form of aid and concessional loans from the multilateral development banks, many countries used higher growth and low interest rates to increase borrowing in commercial sovereign bond markets, and from China. As debt stocks rose, rising interest rates, declining commodity crisis, the Covid-19 pandemic, and an economic slowdown pushed a growing number of countries towards crisis. The international response, initially in the form of a temporary suspension of debt payments and then through a Common Framework for debt relief, has been ineffective. While HIPC provided a framework for dealing with debts owed to the Paris Club of bilateral creditors and to multilateral agencies, there is no framework for reducing or restructuring commercial debt – and China is not part of the Paris Club. In 2024-2025, around half of sub-Saharan Africa's scheduled debt service is due to commercial creditors.

The debt crisis has generated a renewed interest in debt swaps – a long-established part of the innovative finance tool kit. Debt swaps involve creditors forgoing all or part of their claim on debtor countries, conditional on the savings being used to finance agreed priorities. Specific arrangements range from simple bilateral swaps between a creditor and a government; intermediated swaps, under which a creditor waives claims to transfer funds through another actor – usually a UN agency or international non-government organization; and more complex deals involving private creditors and other financial actors.

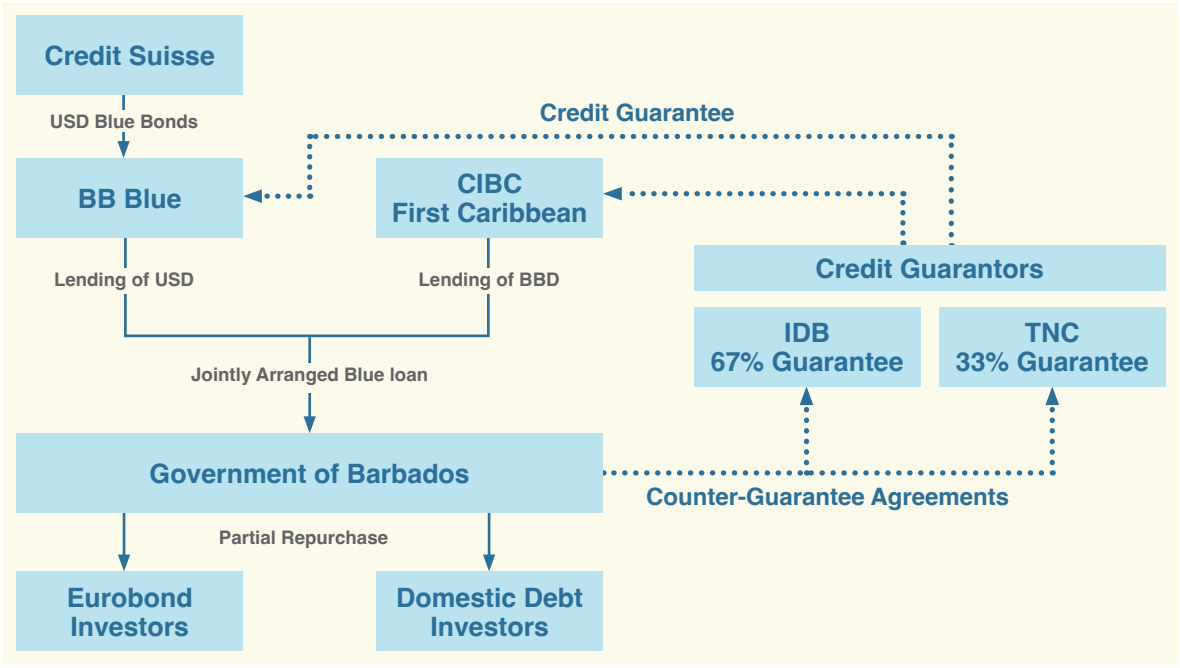
From their beginnings in the debt crisis of the 1980s, debt swaps have been integrated into the operations of several bilateral donors and UN agencies. The Global Fund has made extensive use of debt swaps (Box 4). The World Food Programme reports 12 debt-swap arrangements in six developing countries between 2007 and 2023. Germany has provided debt swaps to finance education in Indonesia and Spain in El Salvador. The Global Partnership for Education has established a "Debt-2-Education" vehicle aimed at converting debt into education spending. Under a deal announced in 2023, Côte d'Ivoire will maintain debt service payments to the French Development Agency (AfD), which will in turn provide an equivalent amount in the form of a grant for education (GPE 2023). The potential investment is around $77 million (*Ibidem*).

Only one of the debt swaps involving the Global Fund and none of those involving the WFP have involved non-concessional bilateral debt. The exception to the rule is a 2010 debt swap between Australia and Indonesia where the Global Fund worked with Export Finance Australia and an Indonesian nongovernmental organization, to ensure the convertibility of the underlying credits. Australia cancelled half of existing repayment claims, and Indonesia channelled the balance into a program aimed at universal access to treatment against TB in Indonesia.

Recent larger-scale debt swaps have been dominated by marine conservation and the conversion of commercial debt. Each of these deals has involved governments buying back sovereign debt at a discounted rate (in effect, reducing debt stock and debt service obligations), the use of risk guarantees to lower the cost of debt refinancing, and public spending commitments. To cite three prominent examples:

- In 2023, Ecuador's government repurchased $1.6 billion of debt for $656 million with revenue from a new sovereign bond – the Galapagos Bond – issued at lower interest, backed by political risk insurance from the US International Development Finance Corporation (IDFC), an $85 million guarantee from the Inter-American Development Bank (IADB), and a group of private reinsurers (Inter-American Development Bank, 2024). Lifetime savings in debt servicing are estimated at over $1 billion, with $323 million directed over the next 18 years to marine conservation, including $12 million annually to capitalize an endowment for the Galapagos Life Fund.
- In September 2022, the government of Barbados completed a $150 million debt conversion deal under which more expensive debts were replaced by cheaper "blue loans" guaranteed by the IADB and The Nature Conservancy (TNC), with around $90 million in savings earmarked for conservancy programmes (TNC, 2023). Figure 1 illustrates the complexity of the deal structure.
- TNC lent funds to Belize to buy back a $553 million "superbond" – the entire stock of external commercial debt – at a discounted price of 55 cents on the dollar. The deal was financed by an issue of "blue bonds" issued at low interest rates and long maturities, underwritten by risk guarantees from IDFC. The savings have been earmarked for marine conservation (Jiang and Cao 2024). In each of these cases, debt discounts made possible by the risk guarantees have expanded the fiscal space available to governments, releasing public financing for investments in conservation. While the precise recipes for different programmes have varied, the ingredients are broadly similar. National governments have committed to debt swaps as part of a wider restructuring operation. Innovative risk guarantees provided by the IADB and the IDFC have reduced the costs of refinancing debt. TNC's programme Blue Bonds for Ocean Conservation has combined finance with support for governance of finance released through the debt swaps.

Figure 1. Barbados debt for nature swap



Source: The Nature Conservancy, Case Study Barbados Blue Bonds For Ocean Conservation, 2022.

Debt swaps sometimes receive an exaggerated press. While individual debt swaps can – and do – create real benefits for individual projects, the headline figures cited often obscure the limited finance mobilized. The African Development Bank has estimated that debt swaps released $185 million a year between 1989 and 2015. Ecuador's the $1.6 billion debt repurchase scheme will mobilize less than $15 million annually. WFP's largest debt swap released $40 million for school feeding over 5 years. Uncertainties over the discount rates applied to swapped debt and budget reporting make it difficult in many cases to establish the real values involved.

Some of the barriers to higher-impact debt swaps can be traced to governance arrangements and the practices of bilateral creditors. Most bilateral debt swaps to date have been transacted with Paris Club lenders. However, few Paris Club creditors have formal debt swap programs in place. Others deploy debt swaps on an ad hoc basis. France formerly had a debt-swap "top up" programme attached to the HIPC Initiative, but this has since wound down. Japan, a major concessional lender, does not use debt swaps. One result is that a debtor country's prospects for securing a debt swap is contingent on the presence of a small cluster of creditors in its debt profile. Another concern is the set of rules which determine how much, and what type, of debt can be cancelled. While outstanding ODA (concessional) credits may be swapped on a voluntary and bilateral basis without limit, a maximum of 20 percent of non-ODA (more expensive) credits may be swapped. From a debt relief perspective and in terms of expanding fiscal space, this is the opposite of what is needed – and it restricts opportunities for countries with large non-concessional debts. US debt swaps are governed by the Tropical Forest and Coral Reef Conservation Act (TFCCA) of 1998, which provides for debt-for-nature swaps, rather than swaps in other development areas.

There are also marked limitations on debt swaps involving private creditors. Because these swaps involve "buy-back" arrangements, an important consideration is the traded value of a country's debt on secondary markets and the incentives for creditors to reduce their claims. In the case of Ecuador, sovereign bonds were being traded at 40 percent of their face value and there was a high perceived risk of default. In effect, the debt swap provided creditors with a guaranteed return and an incentive to reduce their claims. By contrast, Barbados received a far more limited debt reduction (around 8 percent). While Kenya has expressed an interest in debt-swap arrangements, this appears to exclude commercial debt. In 2024 the country refinanced its Eurobond debt through commercial markets by issuing new bonds with a yield of 10 percent, reflecting downgrading by credit ratings agencies (S&P Global Ratings 2024).

Research by Development Finance International (DFI) carried out for this report explored the debt-swap options facing five LICs and LMICs – Ghana, Honduras, Kenya, Senegal, and Sierra Leone. The analysis captures the constraints associated with national debt profiles and current rules. To summarize some of the key findings:

- ***Multilateral debt figures prominently.*** Of the five countries, all but Ghana owe at least half of their debt servicing to multilateral agencies that do not conduct debt swaps. In 2024, 86 percent of Sierra Leone's debt service is owed to multilateral institutions. The comparable figure for Honduras is 58 percent.
- ***Debt owed to China is another limiting factor.*** China is now the single largest bilateral creditor for each country, often by a significant margin. It accounts for $6.6 billion of Kenya's $10 billion in external bilateral debt and around one-third of debt owed to Ghana and Senegal. This is challenging since China has not previously engaged in debt swaps.

- ***Commercial debt is significant for most countries – but debt swap options are limited.*** Of the five countries, all but Sierra Leone have substantial private external bondholder debt that is eligible in principle for debt swaps. In Ghana, Kenya and Senegal, debt service to private bondholders represents at least 40 percent of total scheduled external debt service in 2024. In Honduras it is just under one-third. However, background conditions militate against debt swaps. Honduras and Senegal have a moderate to low risk of debt distress. With their sovereign bonds rated as "stable" by the major credit ratings agencies, there are limited incentives for bondholders to participate in a debt swap initiative since they currently expect to be repaid in full. Kenya has recently concluded a debt refinancing deal with its private external bondholders. Ghana is currently in default to its private bondholders.
- ***There are bilateral debt swap opportunities – but they are limited.*** Four of the five countries owe debts to bilateral lenders with active debt swap programmes (only Sierra Leone does not). Of these four countries, bilateral debt swaps are likely to be feasible in three – Honduras, Kenya and Senegal – that include Germany, Italy and Spain as bilateral creditors. The amounts owed vary from just a few millions to over $300 million. But in each case the debt owed to bilateral lenders with established debt swap programs represents less than 1% of scheduled debt servicing, suggesting limited scope for resource mobilisation (Table 2). Though Ghana also has debts to the three bilateral lenders, the country recently concluded a debt renegotiation under which will make no debt service payments to official lenders before 2039.

The DFI analysis does not imply that debt swaps should be ruled out as part of the strategy for increasing financing for school meals – but it highlights both their limitations and the need for effective advocacy. More would be achievable if more bilateral donors participated on better terms. China's engagement could be a game-changer. The fact that China has yet to participate in a debt swap does not mean it is intrinsically opposed to participation – and a recent Memorandum of Understanding (MoU) between China and Egypt to engage in discussions over a potential debt swap arrangement could signal an interest. However, there are uncertainties about the stance of the Chinese government – and China has traditionally focused its development cooperation activities on infrastructure initiatives rather than social programmes. The participation of more Paris Club donors and a change of rules to allow for more non-ODA debt swaps would also increase the potential benefits of debt swaps.

No plausible debt swap scenario changes the urgent need for systemic debt relief. Analysis by the IMF cautions that debt swaps are rarely likely to be a better option than comprehensive debt restructuring or grant aid in cases where debt is not sustainable (IMF, 2024 Essers et al. 2021; Bolton et al. 2022). In the absence of an integrated debt relief framework spanning all groups of creditors, the fiscal space available to a large group of countries will remain limited. Debt reduction options need to be part of that framework, along with rescheduling and more concessional financing for countries able to access loans. For countries with large commercial debts, G20 governments, the World Bank, and the IMF could play a greater role in promoting debt buy-down operations, effectively providing sovereign bond holders with risk guarantees in return for steep reductions in repayment claims.

The world urgently needs a new HIPC Initiative for a debt crisis that threatens to derail progress towards the SDGs. Responses to the debt crisis will have a major bearing on the fiscal space available to governments seeking to increase social sector financing, including for school meals. For debtor countries now holding unsustainable debts and lacking access to capital markets, there is no credible alternative to debt reduction and restructuring. One proposal, building on an approach adopted in response to the Latin American debt crisis of the 1980s and applied under the HIPC initiative, would see private creditors accepting deep discounts on their debt in return for

guarantees that could be financed through new bonds backed by the MDBs using finance from SDRs or IMF gold sales (Zucker-Marques and Volz, n.d.). For governments with access to capital markets but carrying unsustainable debt, the challenge is to reduce borrowing costs.

Some indication of the potential flow of resources that might be generated can be derived from the application of HIPC criteria. The DFI estimates that reducing debt service to no more than 15 percent of revenues for countries that do not borrow on international capital markets, the target set under HIPC, and halving borrowing costs for those that do, could increase the resources available to governments in Eastern and Southern Africa by $27 billion a year to 2030, and by $24.6 billion a year in West and Central Africa.[16]

While progress towards debt relief has been glacial, there is some momentum behind current reform efforts. The shortcomings of the G20 Common Framework are widely recognized, as is the case for reform (Setser 2023). The IMF, the World Bank, the UN, and independent experts recognize that business-as-usual approaches will act as a roadblock to the SDGs, and have called for more systemic responses to what is a systemic crisis. Other approaches have focused on debt swaps. The Bridgetown Initiative placed debt relief firmly on the climate finance agenda and an Expert Review on Debt Climate and Nature established by Colombia, France, Germany, and Kenya is looking at "debt for climate" and "debt for nature" swaps, alongside "sustainability bonds" as a new source of development financing. The Italian presidency of the G7 has also identified debt swaps as one of its priorities for promoting investments in food security and sustainable food systems (D'Alessandro 2024).

Efforts to mobilize debt relief finance for school feeding need to take account of this backdrop. As the debt swap bandwagon has gathered pace, a growing list of UN agencies and NGOs have advocated for debt swaps for their specific causes. Adding school feeding to that list is unlikely to generate results, not least given the domination of the climate and environment agenda. Moreover, UN agencies themselves are in danger of locking themselves into a zero-sum game as they compete for growing shares of what is likely to remain a limited debt swap market. Positioning school meals as part of a broader debt relief initiative – including but going beyond debt swaps – aimed at achieving wider climate justice and food justice goals is likely to yield more practical results than competitive pitching of separate debt swap offers.

Table 2. A snapshot of debt swap creditors and borrowers

Bilateral Creditors with Recent Engagements in Debt Swaps[a]

Bilateral creditors with formal debt swap programmes	Bilateral creditors that have engaged in debt swaps on an ad hoc basis
Germany	Australia (health only)
Italy	Portugal
Spain	Russia
USA (nature only)	South Africa

a Note that several other bilateral creditors have also engaged in debt swaps in the past but have not been involved in any recent transactions. Most were engaged in the 1990s. These included Canada, Finland, the Netherlands, Sweden, Switzerland, and the United Kingdom. France's formal debt swap programme essentially acted as a top up to the HIPC Initiative and has now closed.

Table 2. A snapshot of debt swap creditors and borrowers (continued)

Honduras: Debt owed to bilateral creditors with a debt swap programme

Creditor country	Total amount payable (US$ thousand)	Debt service in 2024 (US$ thousand)	Share of total external debt service in 2024
Germany	51,212	2,408	0.20
Italy	64,453	1,379	0.11
Spain	54,544	7,215	0.60

Kenya: Debt owed to bilateral creditors with a debt swap programme

Creditor country	Total amount payable (US$ thousand)	Debt service in 2024 (US$ thousand)	Share of total external debt service in 2024 (%)
Germany	349,327	35,086	0.67
Italy	9,033	174	0.00
Spain	100,677	8,390	0.16

Senegal: Debt owed to bilateral creditors with a debt swap programme

Creditor country	Total amount payable (US$ thousand)	Debt service in 2024 (US$ thousand)	Share of total external debt service in 2024 (%)
Germany	13,415	1,060	0.08
Italy	45,805	0	0
Spain	44,615	5,127	0.38

Source: Technical Background Paper: Debt Swaps for School Meals: Opportunities and Constraints, by Gail Hurley and Matthew Martin. Data support by David Waddock. Development Finance International.

Mobilizing climate finance

The climate crisis has catalysed major changes in the development finance landscape. Average annual flows of international climate finance reached $1.5 trillion in 2022. While falling well short of the levels needed to achieve the Paris Agenda climate goals, overall financial flows are rising steeply. Financing for adaptation is also rising but represents the “small change” component of global climate finance – around $76 billion or double the level in 2018 (Naran 2024a). While private finance figures prominently in mitigation investments, adaptation is dominated by public finance. School feeding has yet to figure with any prominence in dialogue on climate finance. That may represent a missed opportunity, both for governments and for international efforts to achieve the Paris Agenda goals.

From a school feeding perspective, the global profile of climate finance has an important bearing on the balance of opportunities and constraints. While avoiding carbon lock-in is an important policy goal, most LICs and LMICs make a limited contribution to greenhouse gas emissions, which in turn limits opportunities for attracting mitigation finance. However, the citizens of LICs and LMICs face elevated climate change risks with few risk management capabilities in place, which makes it urgent to increase investment in adaptation. For both mitigation and adaptation, concessional capital is critical for LICs and LMICs, especially in sectors – such as school feeding – that do not yield revenue streams. In 2022, international concessional capital flows linked to climate reached $81 billion, with official development assistance grants accounting for $37 billion (Naran 2024b). Most of this concessional finance is provided by bilateral donors and development finance institutions. Adaptation financing accounts for around one-third of the total, with another one-fifth spanning dual objectives in mitigation and adaptation.

Climate change has also spurred innovative finance. Carbon taxation is a case in point. Over 70 carbon pricing mechanisms are now operating globally, either in the form of taxes or emissions trading schemes. In 2023, these mechanisms generated $103 billion in revenue (World Bank 2024b). Around half of carbon revenues are earmarked for green transition projects, with another 10 percent distributed to households. In Colombia, around 80 percent of revenues are earmarked for a national Climate Sustainability and Resilience Fund. Beyond tackling climate change by reducing greenhouse gas emissions and supporting national green transition goals, revenues from carbon pricing could support wider SDG objectives, including the eradication of poverty and hunger, by financing adaptation programs in LICs and LMICs. Some embryonic arrangements are already in place. For example, the UN's Adaptation Fund receives part of its revenue from a 2 percent share of proceeds from Clean Development Mechanism projects.[17] Discussions are under way about creating a market-based sustainable financing mechanism under the Paris Agreement to support developing countries, with 5 percent of the finance transferred to the Adaptation Fund ('COP26 Outcomes: Finance for Climate Adaptation | UNFCCC'. n.d.).

School meal programs could make a significant contribution to the Paris Agenda goals. The White Paper prepared by the Research Consortium for School Health and Nutrition provides a compelling analysis showing how school feeding can support wider goals. Home-Grown School Feeding (HGSF) programs provide a vehicle for connecting people to more sustainable food systems. While much depends on policy design and financing, three transmission mechanisms stand-out:

- ***Supporting rural livelihoods and promoting sustainable agriculture.*** Procurement for school meals creates a market that can be structured to generate benefits for smallholder farmers and incentives for sustainable farm practices. Brazil reserves 30 percent of school meal procurement for smallholder farmers and many municipalities include preferences for organic farming. Including traditional varieties of foods and "orphan crops" that have been neglected in school menus can provide children with healthy food and farmers with a market for crops that can be integrated into sustainable intercropping systems.[18]
- ***Creating a predictable market for biofortified foods and climate-resilient crops.*** The fortification of foods and the biofortification of crops – the breeding of plants to increase their nutritional value – is a proven and cost-effective strategy to combat micronutrient deficiencies (Keats et al. 2019). Biofortification increases the micronutrient density of widely grown and consumed food staples, providing a source of vitamins – especially iron, zinc, and vitamin A – vital to healthy development. Drought-resistant varieties of biofortified foods have the potential to raise the productivity and incomes of smallholder farmers, support adaptation, and improve nutrition. One example comes from Harvest Plus, part of the global CGIAR network of agricultural research institutions, which is working in Kenya, Malawi and Tanzania to reach 1.2 million children with biofortified maize through school meals. Another programme in India aims to reach 2 million children in six states, working through the national school feeding program by procuring biofortified wheat and millet from local farmers.

Shifting dietary patterns. Overconsumption of meat, high-fat, high-sugar, and ultra-processed foods, is the primary driver of the global obesity epidemic.[19] It is also a symptom of wider failures in a food system geared towards carbon-intensive, environmentally damaging production and unhealthy diets. Healthy school meals can help correct these food system failures. School menus can cultivate healthier and more sustainable diets with less meat and ultra-processed foods, and more fresh fruit, vegetables, and plant-based protein. In France, the 2021 Climate and Resilience law mandates that vegetarian meals should be served at schools at least once a week. School meal procurement is not a stand-alone measure for combating obesity or lowering the carbon-intensity of food systems, but

as part of a wider toolkit encompassing regulatory measures, taxation, and incentives, it can make a difference.

While evidence of current impacts is partial and fragmentary, school feeding provides a link between different elements in the agenda for food system reform. School meals can promote the healthier, lower carbon diets that are vital to food system reform.[20] They can also tackle the wider consequences of current food system failure, including high levels of poverty and food insecurity among smallholder farmers and the rural poor. Procurement for home-grown school feeding programs provides governments with a ready-made instrument for shifting market incentives towards sustainable agriculture and more self-reliant food systems.

Despite its relevance for the climate agenda, school feeding is largely bypassed by climate finance. School meal programs receive low levels of official development assistance and development finance, and barely figure in the portfolios of some of the major providers of climate finance. Projects coded by funders in their reporting to the OECD illustrates the marginal place of school feeding. Transfers to the subsector averaged 0.005 percent of total climate-related development finance, or $5.5 million per year between 2018 and 2021. Other projects that nonetheless featured a school feeding keyword in their titles or descriptions averaged 0.03 percent – or around $30 million annually.

Multilateral climate funds

Research conducted for this report by ODI Global provides a picture of the international public finance for school meals provided through the multilateral climate funds (MCFs). International public finance flows are dominated by the MDBs and bilateral donors. MCFs such as the Green Climate Fund, the Global Environment Facility, the Adaptation Fund, and the International Fund for Agricultural Development (IFAD) play a limited role in quantitative terms, accounting for 3 percent of total international public finance in 2021/2022, or around $3 billion. The MDBs (around $88 billion in 2021/2022) and bilateral donors ($53 billion in 2021/2022) are far more significant. However, multilateral climate funds provide an important window on approaches to climate finance for school meals in two respects. First, their portfolios provide insights on the priorities shaping financial flows. They are both a reflection of current approaches and a source of influence with other providers. Second, they are a more significant source of finance in some area of relevance to school feeding, including support for the agri-food sectors.

For all practical purposes, school feeding is entirely missing from the agendas of the MCFs. No mention of school feeding was found in the strategy or guidance documents of these funds, and food public procurement was mentioned only by the GCF. The funds do prioritize climate change adaptation and/or mitigation in relation to agriculture and food, but not in relation to education in school settings. Web searches of project portfolios found only 11 projects with school feeding elements, most of which were a small part of the project.

Why has school feeding not figured with greater prominence in the climate portfolios of the MCFs? Part of the answer to that question can be traced to a chicken-and-egg problem. School feeding has been largely absent from the international climate discourse. As the ODI research puts it: “School feeding specifically, does not appear to have featured either in the formal, negotiated decisions made at COPs, or in non- negotiated statements (e.g., declarations) made by multiple parties.” References to school meals are largely absent from country climate strategies for the Paris Agenda, including the Nationally Determined Contributions setting out government ambitions.

ODI Global identified only two NDC papers referencing school feeding. Wider research has identified food system reform as a limited element in NDCs. Unsurprisingly in this context, the ODI research found that the MCFs make no mention of school feeding in their strategy or guidance documents, and public procurement of food was mentioned only by the GCF. While the funds' statements of intent do prioritize agriculture and food in relation to climate change adaptation and/or mitigation, school feeding is not identified as a distinctive strand. ODI Global identified four broad clusters of barriers to expanding climate finance for school meals:

- ***Awareness:*** The absence of school feeding from the wider climate dialogue points to the importance not just of generating evidence of its relevance, but of increasing the awareness of policy makers, civil society, and other actors of the potential benefits for the Paris Agenda of expanding school meal coverage.
- ***Technical evidence:*** Climate finance provided through the MCFs and MDBs is often linked to project proposals requiring stringent evidence of carbon mitigation effects and prospective adaptation outcomes. The absence of clear and consistent metrics for school feeding may be a limiting factor.
- ***Access:*** Despite efforts to simplify access to climate finance, access is still restricted, especially to MCF funding, and developing proposals is risky and costly. For school feeding, this general challenge is exacerbated by the limited number of accredited implementing entities with expertise in school feeding and, more generally, in food systems and education. There is also an institutional disconnection between parts of government leading on engagement with the climate funders and those leading on school feeding.

Implementation: Where school feeding programmes do receive climate finance, various challenges are likely to arise in their implementation. Projects targeting climate and other sustainability outcomes in the wider food system may face high transaction costs where they seek to engage multiple small-scale farmers and food enterprises; smallholder farmers may face challenges in meeting food procurement standards; and there may be timescale mismatches between project funding and more transformative climate benefits. Climate change and related extreme and slow-onset events can also pose operational risks to school feeding projects.

The challenges identified by ODI Global provide a useful guide to the development of solutions that could unlock more climate finance for school meals. International and national advocacy to position school feeding as a climate-relevant policy intervention is almost a pre-condition for change. That objective will not be successfully achieved by treating school meals as (yet another) isolated item on an already crowded agenda. The challenge is to integrate school feeding more effectively into wider coalitions for climate justice. Nationally determined contributions provide an obvious focal point. One likely cause of the absence of school feeding from current NDCs is the predominance of ministries, such as energy, land and agriculture, and finance, in their development. The absence of integrated approaches can result in school feeding falling between the public policy silos. Benin's efforts to integrate school feeding into the country's NDC in partnership with the WFP illustrates both the difficulties and the opportunities (Box 4). Other members of the School Meals Coalition – notably the Research Consortium – are well placed to work with governments in developing the metrics needed to unlock MCF finance.

BOX 4. Mobilising climate finance for school meals – innovation in Benin

A concept note submitted to the GCF in December 2023 aims to transition Benin's National Integrated School Feeding Programme (PNASI), launched in 2017, to a low-emission and climate-resilient model. The proposal, "Home-Grown School Feeding: locally supplied, climate-resilient and energy-efficient green school canteens in Benin", was still under review at the time of writing. It seeks a $45 million GCF grant, towards a total budget of $50 million programmed over 5 years and seeking to reach 650,000 people directly.

In this case WFP proposes to act as Accredited Entity, with implementation by the government of Benin via the General Directorate of Environment and Climate (GDEC) within the Ministry of Living Environment and Sustainable Development (MLESD). The project has three interrelated components: i) lowering emissions and increasing sustainability in Benin school canteens; ii) building resilience for local school canteen value chains; and iii) building knowledge and changing behaviour in schools.

The project targets two of the GCF's adaptation results areas: increased resilience of the most vulnerable people and communities; and health and well-being, alongside food and water security. Specific climate change benefits highlighted in the Benin proposal include:

- reducing greenhouse gas emissions from school meal preparation, including through more efficient cooking stoves
- addressing health problems associated with school meal preparation, e.g. exposure to smoke/ heat
- encouraging climate-resilient farming practices and technologies among participating farmers; reducing deforestation
- increasing resilience of local school canteen value chains through training and infrastructure (e.g. postharvest management techniques, cold chain management, drying and storing)
- promoting fruit and vegetable off-season crops to enhance school pupils' nutrition and health
- establishing contracts with farmers and providing technical assistance to agrifood supply chain actors to boost profitability and incomes.

The GCF accepts concept notes before development of full funding proposals, with the Secretariat providing review and feedback. There is thus no guarantee that a concept will be taken forward in the same form, or at all, as a full proposal, nor that it would be funded. However, as the only example of a project focusing entirely on school feeding across the four MCFs assessed, WFP's concept offers valuable insights into whether and how a case can be made for a strengthened link between climate finance and school feeding programmes, and potentially wider food system transformation.

Source: (Mason et al. 2024).

Carbon markets

International efforts to lower carbon emissions have given rise to a wide range of innovative financing mechanisms, including the development of carbon credit markets. Briefly summarized, carbon markets are trading systems through which governments, companies, or individuals can purchase carbon credits from agencies that sequester or reduce greenhouse gases from the atmosphere. Carbon markets can take the form either of "compliance" systems – such as the multinational, national or sub-national emissions trading schemes operating in the European Union, China and California, and the Clean Development Mechanism operating under the Kyoto Protocol – or "voluntary" mechanisms ('The Clean Development Mechanism | UNFCCC' n.d.).[21] The large gap between current emissions trajectories and those required to keep average global warming below a 1.5°C threshold create conditions conducive to a rapid expansion of carbon markets. Article 6 of the Paris Agreement enables the use of market mechanisms in Nationally Determined Contributions, most of which include carbon credit provisions ('Article 6 - Cooperative Implementation | UNFCCC' n.d.).

School feeding programs have a (largely untapped) potential to contribute to the development of carbon credit markets. Most schools in LICs and LMICs prepare school meals using rudimentary biomass stove technologies, burning firewood and charcoal. Using biomass for cooking poses major health risks for women and children, including respiratory tract infections. While home use of biomass poses the primary risks, school cooking is almost certainly a contributory factor. It also contributes to carbon emissions, the loss of trees for the creation of charcoal, and deforestation. One study has estimated that schools in Africa consume around 8 million tonnes of firewood annually, emitting 12-14 million tonnes of carbon dioxide equivalent (Energy Sector Management Assistance Program 2023). Increased investment in cleaner cooking technologies could reduce current emissions and avoid future emissions. Switching to stoves with greater thermal efficiency, liquified natural gas, or biogas stoves could halve emissions.

The supply chains linking schools to farmers create wider opportunities. Sustainable inter-cropping systems, regenerative agriculture, and the planting of fruit trees can have the twin effect of reducing the carbon intensity of agricultural production and supporting livelihoods. Growing food closer to schools can also reduce the carbon emissions associated with transport, especially for long-distance food trade.

Embryonic markets provide a foundation for future growth. Clean cooking stove technologies account for around 70 percent of Africa's reported carbon credits. Private sector companies and non-government organizations are already tapping into this market. One company – Climate Impact Partners – has used revenues from carbon credit sales to subsidize the price of improved stoves for households across Africa. Farm Africa has marketed carbon credits to finance regenerative agriculture projects, including tree planting, in Ethiopia and Kenya. While much of the finance has been directed to small-scale projects that do not involve school feeding, there is no reason in principle why it could not be extended.

The current and prospective size of carbon credit markets points towards potentially significant financial resource mobilization. Voluntary markets mobilized $2 billion in 2023. Currently, LICs and LMICs capture a small share of that market – around $350 million, in the case of sub-Saharan Africa (Africa Carbon Initiative Markets 2024). Projections for future growth are largely speculative. The African Carbon Markets Initiative reference pathway anticipates a regional market of $6 billion by 2030 – a nineteen-fold increase over current levels (*Ibidem*). Prompted in part by emerging opportunities many LIC and LMIC governments are strengthening their legal and regulatory

frameworks with a view to attracting carbon credit investments. For example, Kenya's amended Climate Act provides for the establishment of a national carbon registry in Kenya and regulates trade in carbon credits, with projects now required to undergo mandatory environmental and social impact assessments (Parliament of Kenya 2023).

Carbon levies will generate large volumes of financing. Revenues from carbon levies differ from other tax streams in that they are more likely to be earmarked for specific spending programs, or tax cuts. Around 40 percent is currently earmarked for spending on climate-related investments or development spending, with a similar amount assigned to general budget support (World Bank 2019). Many governments already link carbon levies to wider development priorities beyond the green transition. Colombia's carbon tax was enacted in 2016 as part of a larger tax reform aimed at boosting productivity and generating revenues for the country's new development agenda, including food security investments. In theory, an expanded revenue base could be used to finance a range of initiatives, from adaptation spending to debt reduction or the reform of food systems, all of which would open the door to school meal financing.

Set against the carbon market opportunities are some major constraints. Well-publicized research investigations have raised concerns over the integrity of many carbon credit projects, highlighting a gap between the claimed and actual emissions reduction potential. Projects based on cleaner cookstoves have figured prominently. Research published in the journal Nature Sustainability found that clean cook stove projects heavily overstated emissions reductions by a factor of nine (Gill-Wiehl et al. 2024). Another survey found that almost three-quarters of projects "very likely over-estimated" the benefits (Gill-Wiehl et al. 2023). Such findings have fuelled concerns over whether carbon credit markets are providing a smokescreen for greenwashing and continued pollution, which in turn led to a sharp reduction in demand for carbon credits in 2024 and an associated decline in price. Recovery will depend critically on the real and perceived credibility of agencies responsible for estimating and monitoring emissions reductions. Separate concerns have also been raised about the degree to which local communities benefit from emissions reductions marketed by reference to their interests.

Against this backdrop, it appears unlikely that carbon markets will generate significant revenue streams for school feeding by 2030 – but countries with robust institutions may be able to attract considerable offset funding. While the new legislation introduced by countries like Kenya and Rwanda marks a positive step, demonstrating institutional integrity takes time – and market recovery will not happen overnight. Moreover, the absence of school feeding from most Nationally Determined Contribution submissions is likely to hamper the rapid development of a project pipeline. As in the case of climate finance more widely, the integration of school feeding into wider food system reform and climate change interventions will be critical in changing this picture.

Looking beyond carbon credits, green levies could play an expanded role in financing SDG investments, including for school feeding. Revenues from carbon taxation are set to increase sharply over the period to 2030 (World Bank 2024b). Currently, only around one-quarter of emissions are covered by carbon pricing mechanisms. Moreover, carbon pricing falls well below the levels consistent with achieving the minimum Paris Agenda goals. Less than 1 percent of global greenhouse gas emissions are covered by carbon pricing schemes consistent with the marginal abatement costs needed to limit global warming to 1.5 °C. Even a modest increase in taxation would more than double carbon revenues to 2030, mobilizing over $100 billion annually (*Ibidem*). Redistributing revenues at the global level to finance SDG investments would help narrow the financial divide separating richer and poorer countries, releasing funds for key social sector priorities, including school feeding.

There are some limited precedents in place. For example, the UN Adaptation Fund is part-financed through a 2 percent share of revenues from the Clean Development Mechanism (CDM) ('Adaption Fund – Climate Funds Update' 2021). The CDM is a Kyoto Protocol vehicle through which countries with emissions reduction targets can finance projects in developing countries to reduce greenhouse gas emissions. Although the CDM established a market link between adaptation finance and mitigation efforts, the Adaptation Fund delivered only around $296 million in funding between 2003 and 2022 (Watson et al. 2023).

Mobilizing private capital through blended finance

Blended finance, broadly defined as the use of public funds to attract private capital, has emerged as a central theme in efforts to bridge the SDG financing gap. While approaches vary, the central theme in blended finance models is the use of guarantees provided by governments, development finance institutions, MDBs, or philanthropic agencies to mitigate the real and perceived risks facing investors. By combining public finance with grants, risk guarantees, loans, and private capital investment, blended finance arrangements typically have long maturity horizons and flexible terms, enabling governments to spread out the related costs.

Blended finance is an umbrella term covering a wide range of practices and project profiles. In areas such as energy and infrastructure, private capital investors are far more heavily represented than in areas more relevant for school meal financing, such as health and education. While conceptually different, blended finance interventions overlap with impact investment and results-based financing approaches. Blended finance in social sectors is often associated with "impact bonds". In this approach, private sector or philanthropic investors provide upfront capital aimed at a specified development outcome, with a service provider contracted to deliver the interventions. An outcome payer – often donor governments or philanthropic organizations – commits to reimbursing the investors and providing a return, contingent on a pre-determined schedule of achievements.

The market for blended finance has grown. Convergence, an agency that tracks blended finance deals, has recorded 1,123 transactions since 2014, totalling $214 billion. In 2023, $15 billion in new deals were transacted. In terms of scale, this represents a large and growing source of SDG financing. However, the use of official development assistance (ODA) in blended finance deals, a critical input for LICs and LMICs, has been stagnant since 2018. Much of the growth has been centred on the green energy transition and infrastructure.

Blended finance does not figure prominently in poverty-related aid programs – and the real leveraging effects appear limited. At present, allocations to blended finance represent less than 3 percent of ODA. It is difficult to establish a clear picture of the leveraging effects of blended finance, as measured by the ratio of private capital mobilized per dollar of aid. The data is partial, and ratios vary with the nature of the projects involved, by sector, and by country. According to one estimate, mobilization ratios in LICs and LMICs average around $1.5 of private capital to $1 of ODA – far lower than in upper-middle-income countries (*Ibidem*). Blending methods are now under review. There has been significant experimentation in recent years, which could unlock new streams of private capital. However, any blended finance approach requires an underlying revenue model that generates market returns. Seeking returns by charging poor households for basic health, nutrition, and education services runs the risk of diminishing results (by pricing the poor out of markets) and reinforcing inequalities.

Sectors with a link to school feeding have figured in the growth of the global blended finance portfolio. Social impact bonds (SIBs) and development impact bonds (DIBs) have been widely used to support projects aimed at improving health (Sulser and Madir 2022). In education, blended finance approaches have been deployed for projects aimed at raising learning levels. One example is the Educate Girls DIB, the first of its type, which aimed at getting out-of-school girls in Rajasthan, India, enrolled and achieving specified learning outcomes. The project brought together a social investment foundation (UBS Optimus), which provided up-front capital, with an NGO provider. An "outcome payer" (in this case the Children's Investment Fund) provided a guarantee to reimburse the initial investment outlay plus a return determined by outcome triggers. The project, which exceeded the targets set, has been replicated in India and more widely.[22]

The Education Outcomes Fund is attempting to increase the flow of blended finance into education. Housed in UNICEF, it facilitates the pooling of funds from governments, donors, impact investors, and philanthropic foundations, with commercial banks providing risk capital and a group of foundations and NGOs providing outcome funding. Recent projects include major programs in Ghana (Box 5) and Sierra Leone. In 2022, Sierra Leone's government and the Education Outcomes Fund launched the $18 million Education Innovation Challenge Initiative aimed at enhancing learning outcomes for 134,000 children. Under the project, a group of national and international NGOs will implement interventions aimed at supporting government education quality programs, with five outcome providers providing finance guarantees.

While there has been a proliferation of blended finance projects in health and education, overall investment and the role of private capital is limited. Education accounts for just 0.5 percent of reported blended finance deals (or $1 billion in financial terms), with health accounting for 6 percent (around $14 billion). Most education deals, with a median size of finance delivered of $17 million, are far smaller than in health ($45 million), where technical assistance is more widely used (Box 6). Impact bonds are far more widely used in health and education than other sectors. The financing landscape is dominated by philanthropic agencies – notably UBS Optimus – development finance institutions, and donor governments, with a very limited presence of scaled vehicles such as funds and funds of funds.

BOX 5. Ghana's Education Outcome Fund

Launched in 2023, the Ghana Education Outcomes Project is an impact bond that aims to support out-of school children reintegrating into Ghana's formal education system and to improve learning outcomes in primary school. Three implementers have been contracted to carry out the project: Street Child UK, Plan International, and Rising Academies. The UK Foreign, Commonwealth and Development Office (FCDO) provided a $25.5 million grant as outcome funder, alongside the government of Ghana, which contributed $4.5 million. Upon achievement of predetermined impact metrics, outcome funders will reimburse the upfront investors with returns up to 10 percent.

Source: (Convergence Blended Finance 2024).

BOX 6. The Medical Credit Fund – a blended finance vehicle with private capital

An example of technical assistance being used in a health-focused transaction is the Medical Credit Fund II (MCF II) launched in 2021. The MCF is a debt fund dedicated to financing small and medium-sized enterprises (SMEs) in the health sector in Africa. It has a "layered capital" structure, blending catalytic first-loss capital, technical assistance grants, and debt financing. MCF II, like the original MCF, provides loans to health SMEs to increase access for low-income patients. All loans are linked to technical assistance to strengthen business stability and reduce MCF's portfolio risks. To date, MCF has issued $180 million in loans to SMEs in health, many of which are too small to qualify for bank loans.

Source: (Convergence Blended Finance 2024; Pharma Access n.d.)

From a donor or government perspective, impact bond finance has some advantages. Compared with traditional funding, DIBs are appealing for donors as they transfer the risk to investors who put in the working capital for the implementing organizations on the ground. They also increase incentives for the service provider to deliver results. Outcome funders repay investors with a premium only after an independent agency has confirmed that results have been achieved, thereby transferring the performance risk from public finance or aid budgets to the private sector. However, investors require a premium – often 10-15 percent or more – which represents a potential loss of aid channelled through outcome funds.

As a financing mechanism for school meals, blended finance suffers from several constraints. Apart from those mentioned above – the need for market returns and the low leveraging ratio – barriers include the small size of most social-sector blended finance projects in LICs and LMICs and the bespoke nature of project design (which limits the scope for scaling up). To these considerations can be added the time involved in negotiating complex arrangements for setting targets, evaluating impacts, and agreeing risk and outcome payment arrangements. Most of the projects mentioned above took several years to move from conception to implementation.

One area of direct relevance to school feeding in which blended finance could play an expanded role is smallholder farming and the development of agricultural value chains. The expansion of school feeding programs depends critically on the supply capabilities of national and local agriculture. Meeting increased demand for school meals through more productive and sustainable smallholder farming and local value chains opens the door to win-win scenarios for nutrition among school children, rural livelihoods, and the environment. However, smallholder farmers and the SMEs linking them to markets – especially female farmers and women-owned SMEs – face many obstacles to increased productivity. Often lacking access to affordable capital, they are unable to invest in the seeds, fertilizers, and technologies that could raise yields and incomes. Inadequate investment in rural feeder roads and crop storage leads to weak rural infrastructure, which raises the costs of inputs, lowers returns, and limits access to markets (Fund for African Private Sector Assistance 2019). These general conditions have a major bearing on prospects for scaling up school feeding.

There are large financing gaps for smallholder farmers and SMEs. On one estimate, Africa's smallholder farmers and SMEs – including farmer organizations, input providers, and distributors – face a financing gap of $65 billion annually (Dokle and Farrell 2021). Given that smallholder farmers (those with less than 2 hectares) account for two-thirds of food production, that represents a significant barrier to increased productivity. Climate change is widening the financing gap. Globally, smallholder

farmers and SMEs received around $5 billion in climate finance in 2019/20, less than 1 percent of the global total – and only one-fifth of the already limited finance directed to agrifood systems (Climate Policy Initiative 2023). Given the impact of climate change on smallholder farming and rural SMEs, this is a limited transfer.

While there is no shortage of vehicles for delivering blended finance, real investments have been limited. Convergence reports an average of 23 deals between 2021 and 2023, with a median deal size of $20 million. The sector has lagged far behind other sectors such as infrastructure, transport and energy in its ability to mobilize private capital. Perceptions of risk and the small size of deals provide part of the explanation – but institutional factors also play a role. Most MDBs have mechanisms for supporting blended capital deals in agriculture. For example, the World Bank's International Finance Corporation (IFC) has supported blended finance projects through the GAFSP and an Inclusive Agritech Facility. However, most blended finance targeting smallholder agriculture and rural SMEs involves small-scale projects negotiated through complex deals involving the private sector, public finance providers, and philanthropists. Most projects in agriculture are less than $1 million. There are exceptions. One fund – the Farmfit Fund – has aggregated larger-scale private investment to provide long-term financing to firms in Africa and Asia by incorporating loss guarantees from aid donors.

School feeding programs could be integrated into larger-scale blended finance interventions. Increased and more predictable budgets for school meals will create market opportunities for smallholder farmers and private sector actors in supply chains. Agricultural cooperatives engaged in providing school meals offer an opportunity to reduce the transaction costs of negotiating deals with individual farmers. One example comes from the GAFSP grant program. Under the Gambia Agriculture and Food Security Project, a government-led program, the GAFSP and the AfDB have both funded investments linking smallholder farm cooperatives producing nutritious food high in iron, folate, and vitamin A to local markets, supporting them in cultivating at least 3,000 hectares of rice and other crops like vegetables, groundnuts, beans, millet, and cassava. The program provides school meals to 130,00 children, with the market demand created by construction of 200 school kitchens. While the project is in this case grant funded, it illustrates the market and investment opportunities created by school feeding programs.

Advance market commitments could play an expanded role in supporting the development and spread of biofortified foods and drought-resistant crop varieties. Farmers adopting drought-resistant and biofortified crop varieties face risks and may lack the initial investment resources required to shift production. Creating an assured market through school feeding could mitigate risks and create investment incentives. This is an area in which blended finance instruments could support agricultural cooperatives and SMEs responding to opportunities created by school meal procurement.

International taxation

The case for international taxation to finance global public goods has a long history, but the political momentum behind that case has gathered force. An immediate trigger has been a concern to mobilize investment in the ultimate global public good – a planet with a climate conducive to human life. Taxing carbon represents both an ecological imperative and an application of the "polluter pays" principle to the climate crisis era. High levels of inequality, billionaire wealth, and the pervasive practices of tax avoidance and evasion by multinational companies have also contributed to a resurgence of interest in international taxation. The Global Solidarity Levies Task Force is exploring

a range of options in consultation with governments and civil society organizations (The Global Solidarity Levies Task Force. n.d.). It will report at the COP30 annual global climate talks in 2025, providing a window of opportunity to shape the innovative finance agenda on a timeline consistent with an SDG recovery and internationally agreed climate goals.

Many proposals have been developed in areas under consideration by the Task Force, including:

- ***Global tax governance***. Global tax governance is a central theme in G7 and G20 dialogue. The OECD has adopted a global minimum tax of 15 percent on multinational corporations aimed at countering the under-reporting of profit (OECD 2024). While the tax is unrelated to development goals or the financing of global public goods, it is projected to generate increased revenues of $155-192 billion, the bulk of which will accrue to tax authorities in OECD countries.
- ***Wealth governance***. In a report for the Brazil G20, the economist Gabriel Zucman has proposed a 2 percent wealth tax on people with more than $1 billion in wealth – a measure that would raise $200-$250 billion per year globally from around 3,000 billionaires. Global wealth taxation remains on the OECD's agenda. It figured prominently in the organization's *Tax Report* to G20 Finance Ministers and Central Bank Governors, which reiterated the need to tackle rising inequalities by taxing capital income and capital gains effectively. Proposals under consideration for the UN's Framework Convention on International Tax would link wealth taxation to the financing of international development goals.
- ***Carbon levies***. Carbon pricing can be implemented through a tax on the carbon content of fossil fuels, or through an emissions trading system (ETS) where permits can be auctioned. Revenues from carbon levies could be used to reduce the cost of decarbonization, finance a green transition, compensate lower income households, and support international initiatives. In one scenario considered by the IMF, a carbon levy could mobilize 1-2 percent of GDP for many countries. While the bulk of finance would accrue to OECD countries and major emerging markets, a redistributive mechanism to incentivize the participation of developing countries would mobilize $230 billion – a level that comfortably exceeds current ODA.[23] Under the proposal, countries with above average per capita emissions would be net contributors to the pool of global finance mobilized by the tax.
- ***Maritime emissions***. The International Maritime Organization (IMO) has endorsed the case for a levy on maritime fuels. Estimates from the UN Conference on Trade and Development (UNCTAD) project potential 2030 revenues at $30 billion to $127 billion, depending on where the levy is set.[24] The IMF has proposed a twin tax on the carbon content of fuel for both aviation and shipping – a move it estimates would mobilize $200 billion by 2035 (Black 2024).
- ***Aviation levies***. An aviation solidarity tax already exists in microcosm. In 2004 a Working Group convened by then President Jacques Chirac produced a report – the 'Landau Report' – recommended the implement of a tax on airline ticketing (Groupe de Travail sur le Nouvelles Contributions Financères Internationales 2004). Revenue from that tax, now implemented by France and nine other countries, has financed UNITAID's delivery of health products to vulnerable populations (Bertrand et al. n.d.). France directs 90 percent of the revenue from an airline ticket tax – a "solidarity levy" to UNITAID.[25] Proposals to extend aviation taxes include a "Frequent Flyers Levy" – a tax imposed on a per flight basis. Designed to weigh most heavily on wealthier air travellers – the wealthiest 20 percent account for around 80 percent of flights – at a flat rate of $25 the tax would have generated $121 billion in 2019.[26]

- ***Climate damage tax***. The extraction of fossil fuels generates large revenues for multinational companies while imposing costs on the world. One proposal aims at imposing an initial $5/tonne fee on the CO_2 embedded in fossil fuels, with an annual increase by an equivalent amount. Part of the revenue would be directed by OECD countries into the recently established Loss and Damage Fund, mobilizing $90 billion in year 1 rising to $119 billion by year 3. By the end of the decade, revenues for the Loss and Damage Fund would rise to $540 billion.
- ***Financial transaction taxes***. Proposals for a financial transactions tax – an approach famously advocated in the 1980s by James Tobin – have gathered a new lease on life. On one estimate a 0.1 percent financial transaction tax could mobilize $237-419 billion annually, half of it from the United States and the European Union (Mazzucato 2023). Various proposals have been framed for a new institution that could govern and allocate the prospective revenues (Stiglitz, J., Ghosh, J., and Tubiana, L. 2003, as cited in Mazzucato 2023).

This non-comprehensive list provides some indication of revenue financing streams that could be utilized for school feeding, but the large headline numbers mask the constraints. Revenues from new carbon levies will initially accrue mainly to OECD countries and major emerging markets. Governments will be under pressure to use those resources to shield low-income consumers from higher energy prices, support investment in the green transition, and finance domestic spending priorities. Redistributing revenues to the Global South, whether for climate or the SDGs, will require major political shifts and a renewed commitment to multilateralism. While each of the proposals outlined above has its government supporters, each also has powerful opponents. A global wealth tax, for example, is well-grounded in considerations of equity and tax efficiency, but efforts to create a global tax system will face obstruction and generate protracted legal debates.

Notwithstanding these challenges, international taxation merits serious consideration by advocates for school feeding. The fact that less than 1 percent of the revenue from a 2 percent tax on billionaire wealth would be sufficient to finance school meals for over 260 million children is not just a stark illustration of global inequality, it also demonstrates the potential for small distributive shifts to produce outsize benefits. Similarly, even a limited transfer to school feeding through revenues mobilized by carbon levies could have transformative effects. Positioning sustainable school feeding as part of the wider agenda for climate adaptation and food system reform could unlock new resources.

Conclusion

Any effort to achieve a transformative scale-up of school feeding programs in LICs and LMICs will require a step increase in domestic and international public finance. The resurgence of interest in innovative finance should not divert attention from the urgent need to increase national tax-to-GDP ratios and strengthen the efficiency and equity of public spending. Similarly, no amount of financial innovation and engineering in the sphere of international development finance will displace the need for grants and highly concessional finance.

Innovative finance can play an important supplementary role. The new momentum behind innovative finance creates opportunities to mobilize new and additional finance for school meals. While the demand for innovative finance will continue to greatly exceed the supply, there are compelling grounds for putting school feeding more centrally on the agenda for resource mobilization. Few other interventions tackle so directly and simultaneously the interlocking crises in hunger, poverty, education, and health at the heart of the SDG delivery gap.

School feeding should be positioned as one element in a wider strategy for accelerating progress towards the SDGs. In a very crowded international marketplace for innovative finance proposals, school feeding is conspicuous by its absence. There has been a dearth of initiatives focused on school meals, reflecting the limited profile of the issue on the international development agenda. That has started to change with the establishment of the Global Alliance Against Hunger and Poverty under Brazil's G20 Presidency. However, interest in school feeding has been swamped by wider concerns related to the climate crisis, the "first 1,000 days" of nutrition, environmental conservation, and social protection. Integrating school feeding into wider agendas for climate justice, food system reform, anti-poverty strategies, and social protection is more likely to yield results. An important corollary is that school meal advocates should seek participation in wider coalitions for change.

LIC and LMIC governments could use several innovative finance approaches to mobilize domestic resources. While opportunities and constraints vary enormously across countries, five broad opportunities stand out:

- closing tax loopholes and redirecting subsidies
- imposing "sin taxes", which could mobilize another 0.7 percent of GDP in revenues
- within the "sin tax" wrapper, taxing sugar-sweetened beverages and ultra-processed foods
- introducing natural resource taxes, including levies on hydrocarbon resources
- earmarking revenue from specific taxes for school meals, which could both mobilize new funds and win over public support

International innovative finance could make a substantial contribution to school meal financing. This report has identified a number of opportunities and constraints. Once again, these will vary across countries, reflecting external debt profiles, the state of national finances, and government priorities. To summarize the broad conclusions reached in this report:

- ***External debt.*** While some countries may be in a position to secure debt swap financing for school meals, this is likely to remain limited. Expanding fiscal space through comprehensive debt relief, with governments committing to increase investment in priority social areas, will remain critical.
- ***Climate finance.*** Levels of climate finance are set to increase markedly to 2030, but school feeding has been largely bypassed to date. New adaptation and (some) mitigation finance could be mobilized through the MDBs, bilateral donors, and multilateral climate funds, but only if evidence of impact is strengthened and advocacy is sustained.
- ***Blended finance.*** There are opportunities to mobilize blended finance for smallholder agriculture and SMEs involved in school feeding supply chains. Unlocking those opportunities will require cooperation between governments, philanthropic foundations, and both the concessional and non-concessional arms of MDBs.
- ***International taxation.*** While many international taxation proposals merit consideration, the most likely candidates for resource mobilization are carbon levies and climate change taxes. The bulk of these revenues will be directed to domestic green transition financing. However, a strong case can be made for some degree of international redistribution through transfers to MDB financing mechanisms – such as the World Bank's IDA and the African Development Bank's Africa Development Fund – or through international adaptation funds. This would increase the resource envelope for school meal financing.

Governments, philanthropic organizations, and civil society groups navigating the innovative finance landscape for school feeding face difficult and uncertain choices. Some innovative finance options appear to offer revenue streams that are modest but that have the advantages of a high level of relevance for school meals, limited new administrative demands, and a strong prospect of political buy-in. Taxes on sugar-sweetened beverages are a case in point. At the other end of the spectrum, as we show in the table below, some options hold out the prospect of multi-billion-dollar annual revenue streams, but with a more tenuous link to school meals and more limited prospects of political adoption.

Table 3. Illustrative assessment of resource mobilization potential and political feasibility

Financing Measure	Resource mobilization potential	Political feasibility of action by 2030	Strength of link to school feeding	Mechanisms for school meal financing
Domestic				
'Sin taxes" (non-SSB)	Moderate	High	Moderate	General budget/ earmarking
Sugar-sweetened beverage (SSB) tax	Low	High	High	General budget/ earmarking
Natural resource tax	Moderate/High	Moderate	Low	General budget/ earmarking
International				
Debt swaps	Low	High	Moderate/Low	Assigned revenue
Debt relief	High	Moderate	Low	General budget
Climate finance	High	High	Low/Medium	Adaptation and limited mitigation
Multilateral finance institutions	Medium	High	Medium	Concessional finance and grants for poorest countries
Carbon credits	High	Low/Medium	Medium	Carbon credit markets
International levies	Moderate	High	Low	Special bodies
Blended finance	Low	High	Low	Public finance and private capital
Wealth taxes	High	Low	Low	National revenue authorities and international oversight, for example through the OECD and G20
Financial transaction tax	High	Low	Low	National collection of revenues on traded assets, with international reallocation

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Endnotes

1 The Leading Group was established by Brazil, France, Canada, and Spain. It now spans 66 countries and a wide range of government and non-government actors (Leading Group on Innovative Finance for Development. n.d. 'Innovative Finance for Development'. https://www.diplomatie.gouv.fr/IMG/pdf/2021_12_-_leading_groupe_innovative_financing_en__web2_cle85adb2.pdf.

2 All poverty figures cited are in 2017 PPP.

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4 Regional Economic Outlook: Sub-Saharan Africa. A Tepid and Pricey Recovery. (International Monetary Fund. African Dept., April 2024). https://www.elibrary.imf.org/display/book/9798400267895/front-1.xml.

5 Patterns and Drivers of Health Spending Efficiency (Mercedes Garcia-Escribano,Pedro Juarros,Tewodaj Mogues; March 2022). https://www.imf.org/en/Publications/WP/Issues/2022/03/04/Patterns-and-Drivers-of-Health-Spending-Efficiency-513694.

6 Poverty and Shared Prosperity 2022 (World Bank, 2022b). https://www.worldbank.org/en/publication/poverty-and-shared-prosperity.

7 For tobacco, the study estimates revenues resulting from raising excise taxes to the WHO-recommended level of 70 percent of the retail price capped at a 50 percent post-tax price increase. For alcohol, the model estimate revenue effects based on countries moving from the 25th percentile of revenue to GDP to the 75th percentile based on data for 50 countries, with a higher graduated scale for countries moving from the 75th percentile to the 90th percentile

8 https://www.thelancet.com/journals/lanam/article/PIIS2667-193X percent2822 percent2900074-6/fulltext

9 https://www.addistaxinitiative.net/sites/default/files/resources/Factsheet percent20Philippines.pdf

10 Derived from World Bank SSB taxation database (https://ssbtax.worldbank.org/)

11 Source: International Advocacy Group (https://assets.advocacyincubator.org/uploads/2023/GHAI-Case-Study_FP_SB-Taxes-1.pdf)

12 A WHO global review found that only nine countries earmarked SSBs (WHO 2023).

13 As of October 2023, donor contributions to GFF had reached $2.5 billion, with $543 disbursed. The GFF claims that disbursements have made possible $4.2 billion in WB grants, though it is difficult to establish whether these transfers would have taken place without GFF's contribution. https://www.development-finance.org/files/AMBITIOUS_DEBT_RELIEF_INITIATIVE_FULL_REPORT_SEPT_2024.pdf

14 Updating Institutional Technologies A Purpose-Driven Fund To End Extreme Poverty. (Brookings Institute, April 2023). https://www.brookings.edu/wp-content/uploads/2023/08/Kharas-McArthur-Purpose-driven-fund-Working-Paper.pdf

15 https://www.kirkensnodhjelp.no/contentassets/c1403acd5da84d39a120090004899173/a-nordic-solution-to-the-new-debt-crisis-sep22.pdf

16 Domestic revenues, debt relief and development aid: Transformative pathways for ending AIDS by 2030: Report On Western And Central Africa (UNAIDS, 2024). https://www.unaids.org/sites/default/files/media_asset/domestic-revenues-debt-relief-development-aid-wca_en.pdf

17 The Clean Development Mechanism (CDM) is a United Nations-run program that allows countries to fund projects in developing countries that reduce greenhouse gas emissions. The projects earn certified emissions reduction (CER) credits, which can be traded or sold to other countries to help them meet their emissions targets

18 Home-grown school feeding: promoting the diversification of local production systems through nutrition-sensitive demand for neglected and underutilized species. In: L. Swensson et al. Eds. Public Food Procurement for Sustainable Food Systems and Healthy Diets. FAO, Alliance of Bioversity International and CIAT, and Universidade Federal do Rio Grande do Sul – Editora da UFRGS. (Singh, 2021; Hunter et al., 2022;) https://www.fao.org/3/cb7960en/cb7960en.pdf

19 An exception to this general rule in sub-Saharan Africa, where there is an under-consumption of meat-based protein. Hunter, D., Loboguerrero, R. A. M., & Martinez, B. D. (2022). Next-generation school feeding: Nourishing our children while building climate-resilience. United Nations Nutrition Journal 1, 158- 163 https://cgspace.cgiar.org/handle/10568/125753

20 The White Paper prepared by the Research Consortium of the School Meals Coalition includes a number of modelling estimates on the potential size of the benefits from menu changes and tackling food waste. This suggests that GHG emissions from school meal programmes worldwide could be reduced by around 13 percent by halving food waste, 28 percent by adopting a flexitarian diet, and by 46 percent and 54 percent through a vegetarian and vegan diet, respectively.

21 Under the CDM, emission-reduction projects in developing countries generate carbon credits used by industrialized countries to meet part of their emissions reduction targets. The carbon market includes market mechanisms established under Kyoto Protocol, including the Clean Development Mechanism, International Emissions Trading, and Joint Implementation. These are regulated by the United Nations Framework Convention on Climate Change and the Voluntary Carbon Market. The Voluntary Carbon Market allows individuals and companies to offset or reduce emissions through various financing mechanisms. Africa's carbon markets issued approximately 50 $MtCO_2e$ of credits and retired an estimated 25 $MtCO_2e$ in the past year, far below the markets" technical potential and stated ambitions. Africa's total technical potential for voluntary carbon markets is 2,400 $MtCO_2e$ by 2030,45 and ACMI's ambition is for 300 $MtCO_2e$ of African credits to be retired annually by 2030 ('The Clean Development Mechanism | UNFCCC'. n.d.).

22 The Quality Education in India Impact bond, which ran from 2018-2022, funded four specified interventions through three service providers with a total value of $11.2m.

23 The IMF exercise sets a "Capped carbon price" of $75, $50, and $25 per ton of CO_2 for, respectively, high-, middle-, and lower-middle and low-income countries in 2030.

24 These are mid-range estimates for carbon levies set at $30-120/tonne and $150-300/tonne (Tunagur 2024).

25 The tax is now in operation in ten countries: Cameroon, Chile, Congo, France, Guinea, Madagascar, Mali, Mauritius, Niger and the Republic of Korea. Norway allocates part of its tax on carbon dioxide emissions from aviation to Unitaid.

26 Aviation Climate Finance Ussing a Global Frequent Flying Levy (Xinyi Sola Zheng and Dan Rutherford Ph.D., September 2022). https://theicct.org/wp-content/uploads/2022/09/global-aviation-frequent-flying-levy-sep22.pdf.