School Meals Programmes and the Education Crisis

A Financial Landscape Analysis

the Education Commission

Sustainable Financing Initiative for School Health and Nutrition

School Meals Coalition
Nutrition, Health and Education for Every Child

This paper was prepared for the Sustainable Financing Initiative for School Health and Nutrition (SFI). Led by the Education Commission, the SFI is one of five initiatives working to achieve the goals of the School Meals Coalition – a partnership between governments, UN agencies, non-government organisations, and research institutions aimed at expanding the reach and strengthening the quality of school feeding programmes. Working closely with governments and donors, the aim of the SFI is to identify multi-year financing opportunities for school meals programmes with a focus on low- and lower-middle-income countries.

The immediate context for this financial landscape analysis is the learning crisis triggered by school closures during the COVID-19 pandemic and the shrinking fiscal space available to governments. We look at the potential for school feeding programmes to play an expanded role in addressing the learning crisis – and at the public financing options available. The analysis draws on seven rapid assessment country studies commissioned by the SFI.

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The cover images for this report are from Kenya's Food for Education programme - a school feeding social enterprise dedicated to ending hunger among school children. Founded by Wawira Njiru, the organisation provides daily meals for over 40,000 children. (Information on the programme can be found here.)

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Executive Summary

School feeding programmes generate wide-ranging benefits for children and society. Those benefits traverse the policy frontiers between health, nutrition, poverty reduction, and education, creating virtuous circles of human capital development linking current to future generations. The multi-dimensional effects of school meals

programmes are critical in education because the nexus between malnutrition, poverty, food insecurity, and low levels of learning represents a barrier to attainment of the Sustainable Development Goal (SDG) of education for all. On any assessment of benefit-to-cost returns, school feeding represents one of the best-buy investments available to policymakers, especially in countries marked by low levels of learning achievement, high levels of child learning, malnutrition, and endemic poverty. There is strong evidence, summarised in this paper, pointing to the wider benefits of school feeding for equity, with children living in poverty and girls registering some of the most marked gains in school attendance and learning. Home-grown school feeding programmes also create markets for farmers, with potential benefits for employment, income, and the development of sustainable food systems.

School closures during the COVID-19 pandemic have magnified a pre-pandemic learning crisis and added to the urgency of school feeding investments. There is no precedent for the learning setbacks incurred during the pandemic. Schools in poorer developing countries were closed for longer than in rich countries – and support for home learning was limited and unequal. As children have returned to school, the scale of the learning reversals is becoming more evident. The World Bank estimates that the share of 10-year-old children living with “learning poverty” – unable to read or write – has increased from 53 percent to over 70 percent. UNICEF data suggests that the share of children gaining foundational literacy skills at the right age has fallen from an already low 30 percent to less than 10 percent. One of the most powerful drivers of these setbacks has been an increase in learning disparities, with the poorest children falling further behind.

Rising poverty and malnutrition are compounding the learning crisis. Slower growth and food price inflation have increased the number of children living in monetary poverty, pushing the world further off track from the SDG goal of eradicating extreme poverty. Malnutrition indicators are also worsening. New data analysis carried out for this report applies average regional estimates for undernutrition to school age cohort data for South Asia and sub-Saharan Africa. Based on UN Food and Agriculture Organization (FAO) data

we estimate that some 176 million school-age children were living with the experience of hunger in 2021 – a 36 million increase over the pre-pandemic level. This was before the market disruption triggered by the war in Ukraine magnified an already marked drift towards food price inflation. Estimates from the World Food Programme (WFP) covering eighty countries suggest that some 23 million children of school age were pushed into potentially acute food insecurity in the first half of 2022.

School meals programmes have the potential to counteract the effects of the "triple crisis" in learning, poverty, and malnutrition. Well-designed and properly financed programmes can increase school participation, reduce dropout rates, and improve learning. Vulnerable learners and children from the poorest households stand to make significant gains. Recent evidence from Ghana is instructive. The school meals programme increased learning for all children, but the biggest gains were registered among girls and children living below the poverty threshold. Gains for the poor were equivalent to almost a full school year as measured by learning outcomes. Evidence from India shows that the benefits of the Midday Meals scheme, the world's largest programme, extends to future generations. Children of mothers who participated in the scheme were less likely to drop out of school, married later, and made greater use of health facilities – and their children were less likely to be stunted.

The fiscal space for governments seeking to restore and expand school meals programmes is shrinking. Before the pandemic, governments across the world's poorest countries were extending the reach of school meals programmes. Most had adopted ambitious plans for scaling-up provision. These plans are now in jeopardy. Slower growth, reduced revenue collection, and external debt pressure has left governments confronting increased social need with diminished resources. Meanwhile, food price inflation has increased the cost of school feeding provision. Tightening fiscal constraints place a premium on efficiency and equity in school meals financing. While there is a powerful case for setting a course towards universal coverage, the most deprived children should have the first call on resources.

Aid donors and multilateral development banks (MDBs) have under-invested in school meals programmes. Apart from the United States, no major donor has prioritised investment in school meals. The USDA's McGovern-Dole programme, which delivers US agricultural surpluses and technical advice, accounts for over 90 percent of the international aid effort, which averages around $200 million from 2018 to 2020. Only nine donors provided more than $1 million annually. While it is difficult to establish the financing envelope provided through the MDBs, none of which have coherent school feeding

strategies in place, the investment appears limited. The result is an aid system for school feeding characterised by fragmented small project grants more akin to the profile of a small- or medium-sized NGO than a credible international cooperation effort on the part of major donors.

There is scope for a global initiative aimed at mobilising the $5.8 billion in new and additional finance advocated by the School Meals Coalition (SMC). The proposed finance would support the recovery of school meals programmes in poorer developing countries and extend their reach to an additional 73 million children. Despite the fiscal constraints they are operating under, governments could generate around one-half of the finance through domestic revenues, supplemented (in a more benign policy scenario) by debt relief. Aid donors and MDBs could mobilise around $3 billion in grant aid and multilateral finance. The World Bank's International Development Association (IDA) could play a more prominent role in financing. This paper looks at some of the financial levers that could be operated to finance the plan.

Siloed approaches to policy may hamper the development of school meals programmes. National governments, aid agencies, and international financial institutions typically organise policy around well-defined siloes. These include child health (for under-5s), education, nutrition, and social protection. Incentives for cross-thematic working are often weak, with line ministries or thematic administrators competing for budgets allocated to their siloes, rather than developing cross-departmental plans with the potential to unlock wider benefits. One of the strengths of school meals programmes is that they deliver multi-faceted benefits across the interlocking deprivations associated with poor learning, malnutrition, poverty, and food insecurity, including the development of more resilient rural livelihoods and sustainable food systems. Unlocking these and other benefits requires planning and coordination across ministries. However, school feeding budgets are typically located in ministries of education – and the record on cross-departmental cooperation is decidedly mixed.

We report on seven "rapid assessment" case studies undertaken for this report. The case studies were designed to shed light on the policy environment under which governments are operating, including the public finance environment. The countries covered are Bangladesh, Benin, Bolivia, Guatemala, Rwanda, Senegal, and Tanzania. The assessments drew on official policy documents, budget data, and interviews with key informants from government, donors, and NGOs.

Findings from the case studies reflect differences in context – along with several recurrent themes. School meals programmes varied in reach from universal for all levels of school education (Bolivia and Guatemala), to near universal for primary school (Rwanda), to an actual or planned scale-up in primary schools (Bangladesh, Benin, and Senegal), and close to zero provision in mainland Tanzania. Despite these differences, there was a strong political commitment across most countries, reflected in high-level political engagement and (as in Bangladesh and Benin) governments taking over the financing of major pilot programmes from donors, mainly the World Food Programme.

Fiscal space is limited – but more is possible. The pressures on public finance were evident across countries, especially Benin, Senegal, Rwanda, and Bangladesh. In the first three countries, debt servicing obligations are rising, revenue is increasing slowly, and governments have adopted stringent targets for reducing fiscal deficits. However, in each case there is scope for additional revenue mobilisation. In Senegal's case that includes the deployment of gas revenues to fund social investments. While most governments are financing school meals programmes from general revenues, Bolivia funds its programme from hydrocarbon taxation while Guatemala finances school feeding from VAT. There is more scope for considering earmarked taxes.

Achieving the targets specified in national plans will require an additional financial effort. Back-of-the envelope calculations suggest that Bangladesh could finance universal primary coverage with an investment of less than 0.2 percent of GDP, rising to around 0.3-0.5 percent for Benin and Senegal. Translating these figures into revenue terms underscores the potential affordability of the investments. At current unit cost levels, Bangladesh could triple the coverage of its programme, reaching an additional 6 million children, by mobilising an additional 0.6 percent of GDP in revenue. Investing an additional 0.2 percent of GDP would enable Benin to more than double the coverage of its programme.

Equity is a major concern. Transfers provided through school meals programmes represent an important contribution to household budgets. Drawing on poverty-gap data, we estimate that they represent between 8-16 percent of the average income of the extreme poor ($1.90 2011 PPP) in Rwanda, Benin, Senegal, and Bangladesh. In Bolivia and Guatemala, they represent respectively 8 percent and 12 percent of the national extreme poverty thresholds. Most governments are targeting support, whether by school (public and primary rather than secondary and private), geography, or a range of poverty, education, and food security indicators. It is difficult to establish how effective the targeting measures are in practice. However, it appears likely that large numbers of poor and vulnerable children may not be

covered. In one country – Rwanda – households account for the bulk of financing, which may have the effect of placing financial pressure on household budgets, with adverse food security implications, or excluding poor children. In Guatemala, where school meals represent the single largest safety net for children, there appears to be an overwhelming case for increasing per capita support on a targeted basis to the most deprived children.

National planning is a major gap for many countries. Most governments have adopted school feeding strategies underpinned by guidelines and protocols on food baskets. The strategies include targets for reach linked to a broad long-term goal of universal coverage. However, three key ingredients for successful implementation are missing in most cases. First, it is not clear that credible national costing estimates have been carried out identifying the public financing costs of specified food baskets, including the marginal costs of delivery to disadvantaged areas. Second, and by extension, there is a limited alignment between the targets set in national strategies on the one side, and budget allocations and financial planning on the other. Third, few strategies appear to integrate planning for school meals into the wider system of safety nets and social protection. Given the breadth of school meals programmes, this may represent a wasted opportunity.

The Sustainable Financing Initiative for School Health and Nutrition (SFI) could play an important role in supporting the expansion of school meals programmes. An obvious focal point is the financing for the School Meals Coalition's $5.8 billion proposal for restoring and expanding school feeding programmes. Much of this funding will have to come from governments facing acute fiscal stress. The SFI should conduct further research into potential sources of resource mobilisation, ranging from general taxation to earmarked taxes, including taxes of food-related "public bads," and external development finance. Recognising that new and additional resource mobilisation is one part of a wider equation, the SFI should also consider more in-depth research on equity and efficiency in school meals expenditure, working with the Research Consortium of the School Meals Coalition. This work could be developed in concert with national governments and research partners seeking to expand the reach of national programmes. In that context, a properly resourced SFI could, where appropriate, provide technical advice on approaches for integrating school meals planning into wider frameworks for public finance.

The SFI should engage with donors and the MDBs to identify strategies for increased resource mobilisation. An immediate priority identified in the report is the development of a credible reporting system under the OECD's Development Assistance Committee able to capture levels of donor finance. While this is a technical task it has far-reaching

implications. The current system of fragmented and partial reporting is a barrier to effective donor action and, by extension, a constraint on national planning. Looking beyond technical reporting issues, it is evident that aid donors and the MDBs have failed to mobilise support on a scale even remotely commensurate with the scale of the crisis now facing developing countries. For that reason, the SFI should combine research on the potential role of international development finance with advocacy aimed at achieving more effective leadership on the part of donors and the MDBs.

It is important that the SFI adopts a political economy perspective in addressing the school meals financing challenge. While this may be an obvious point, it is worth emphasising that many of the barriers to the expansion of school meals programmes are rooted in national and local politics. Technical efficiency arguments alone are unlikely to remove these barriers. Building on the work of the Education Commission, the SFI should actively ground its research and advocacy work in the ethical case for school meals at a time when millions of children are facing devastating setbacks in prospects for nutrition, health, and learning. The SFI could play a role in galvanising and supporting the development of national and international coalitions to drive change.

Introduction

There is an extensive and growing body of evidence documenting the wide-ranging benefits of school feeding programmes. These programmes are among the world's most extensive social welfare interventions. They generate benefits cutting across policy frontiers in health, nutrition, education, food security, and poverty reduction. Child health and learning are cornerstones for the development of human capital – the health, knowledge, and skills that define the prospects of nations. They are also at the heart of human development, broadly defined as the capabilities people need to flourish and realise their potential. Well-designed and properly funded school meals programmes have the potential to unlock a virtuous and self-reinforcing cycle of progress in health, nutrition, and learning, catalysing transformative change in the development trajectory of nations and the life chances of children.

School meals programmes have a long history. From voluntary beginnings in the 19th century, they were institutionalised in today's rich world through public policies aimed at tackling the hunger and malnutrition evident among school children. As governments recognised the barrier to learning posed by childhood hunger, they subsequently evolved as a key element in modern welfare states. School feeding programmes are also a ubiquitous feature of the education landscape in developing countries. In 2020 they reached some 388 million children globally, more than at any time in history, making school feeding the most extensive safety net in the world according to the World Food Programme (WFP 2021). Prior to the COVID-19 pandemic, the reach of school feeding programmes was growing across the developing world, albeit from relatively low baselines in many countries.

While school feeding programmes provide a vital safety net for children from food insecure homes, they are also critical for learning. Good nutrition is one of the most fundamental conditions for the development of human capital – the knowledge, skills, competencies, and health that define the development potential of nations. Schools play a pivotal role in the formation of human capital. The importance of that role has been reinforced by the emergence of increasingly knowledge-based economies. The nutritional status of children and adolescents has a powerful bearing on learning prospects (Bundy et al. 2018). In many countries, the interaction between poverty, hunger, and low levels of learning is a major source of limited and unequal learning outcomes. School meals programmes provide an obvious vehicle for tackling the learning constraints associated with poor nutrition. However, as noted in the WFP's *State of School Feeding Report* (2021), the reach and

quality of school meals programmes is most limited where it is most needed, and where the potential returns are highest – in the poorest countries and among the poorest children.

Several factors have contributed to the shortfall. The very strength of school meals programmes in delivering multi-faceted benefits across a broad spectrum of outcomes may also represent a limiting factor. Policymakers and institutions are prone to siloed thinking, operating in a world marked by clear boundaries and budget distinctions between health, education, agriculture, nutrition, and other areas. The SDGs – the 2030 targets adopted by the international community – reflect these siloes. All too often, school meals programmes appear to fall into the institutional policy cracks between siloes. That is unfortunate given that children themselves experience deprivation in any area of nutrition, health, or learning as an overall constraint on their life chances. Another barrier to the development of school meals programmes has been a failure to focus on the "8000 days" during which children grow, develop, and transition to adulthood, as distinct from the "first 1000 days" (Bundy et al. 2017).

Finance is another constraint on the development of school meals programmes. Cost-benefit analysis demonstrates that school feeding is a high-return investment (Verguet et al. 2020). Indeed, failing to invest in school meals implies significant losses transmitted through the lower levels of economic growth, increased inequality, learning losses, and nutritional deficits associated with lower levels of human capital. Systematic reviews suggest that school meals programmes may be among the most effective interventions available to policymakers (Bedasso 2022). The benefits of school feeding for children measured in terms of averted suffering, improved health, and enhanced possibilities for learning go beyond monetary metrics. Even so, school meals programmes must be financed out of real budgets – and the budgets are most limited where the need is greatest.

This general backdrop to school feeding has taken on an urgent new relevance. School closures during the COVID-19 pandemic have triggered unprecedented setbacks in learning. The poorest children, many of whom received little or no support during the closures, have borne the brunt of these setbacks, as witnessed by a marked increase in evidence of learning disparities. As schools re-open, these children are returning to education carrying not just the burden of lost learning, but the higher levels of poverty and malnutrition caused by economic downturns and surging food price inflation – a pre-COVID phenomenon magnified by the war in Ukraine.

These are perfect storm conditions for large-scale reversals in education, with rising child poverty and malnutrition derailing a recovery in learning. School meals programmes could

help provide a degree of shelter from that storm if the public finance can be mobilised. That constitutes a big if. Governments in the world's poorest countries have emerged from the COVID-19 crisis facing acute budgetary pressures. Slower economic growth has pushed revenues below the levels projected before the pandemic. Debt repayment pressures are mounting, crowding out investments in priority social areas. The fiscal space available to governments is shrinking, with the IMF (2022a) warning that painful financing for the SDGs will come under mounting pressure. Against this backdrop, what are the prospects for restoring and expanding the reach of school meals programmes?

The answer to that question matters for millions of children around the world. Pandemic-related classroom closures in developing countries left some 300 million children without access to school meals – in some cases, their only nutritious meal of the day. Governments are now faced with the twin challenge of restoring and extending school meals programmes. Global financing estimates indicate that $5.8 billion would be required annually to finance a recovery in programmes closed during the pandemic and reach an additional 73 million children (Drake et al. 2020). Achieving that objective will take an increased effort on the part of national governments backed by international partnerships to provide new and additional development finance.

There is a compelling case for making that investment. In an increasingly constrained fiscal environment, governments inevitably place a premium on the efficiency, equity, and impact of public finance. As the Global Education Evidence Advisory Panel has put it: "given the scale of the challenge, resources within each country need to be directed to the most cost-effective approaches possible" (2022, 6). School meals programmes meet this criterion, especially in countries with the greatest human capital deficits related to learning, nutrition, and school participation. In assessing financing options in education, it is important that policymakers look beyond traditional single dimension siloes to the multi-dimensional benefits they offer (Alderman et al. 2021). Considering the world from the perspective of a child who may be sitting in a classroom unable to learn because they are ill, hungry, or at risk of dropping out of school because of household poverty, rather than through the prism of ministry budget lines, can serve as a useful guide for public policy.

This background note has been prepared for the Sustainable Financing Initiative for School Health and Nutrition (SFI) of the Education Commission, which is part of the School Meals Coalition (SMC).[1] It is divided into five parts.

Part 1 provides a contextual framing. It sets the scene by providing an overview of the "triple crisis" in education, summarising some of the emerging evidence on learning outcomes, child poverty, and malnutrition.

Part 2 looks at the evidence on school meals programmes. It highlights the potential role of school feeding in addressing the underlying drivers of the "triple crisis" by supporting learning, enhancing equity, and countering the effects of poverty and malnutrition.

Part 3 turns to the critical role of public finance in unlocking these benefits. We then look at the fiscal constraints facing governments and wider policy issues, including the balance between universal and targeted approaches. International aid remains a critical source of funding for school meals, especially in the poorest countries. The aid effort, which we review in this section, excluding one major donor (the United States) is limited, fragmented, and dominated by a proliferation of small grants. Part 3 concludes with a brief overview of the financing options facing governments as they seek to scale up school meals financing. Despite the very tight fiscal constraints now facing many governments, the investments required for an ambitious expansion in the reach of school feeding programmes are relatively modest. Financing options open to governments vary considerably depending on levels of income, macro-economic factors, debt, and revenue mobilisation efforts. However, a partnership between governments and aid donors could mobilise the $5.8 billion envisaged by the School Meals Coalition.

Part 4 provides an overview of findings from seven rapid assessment country studies. These were designed to develop a clearer picture of the policy environment for school meals financing constraints and opportunities. Seven countries were selected: Bangladesh, Benin, Bolivia, Guatemala, Rwanda, Senegal, and Tanzania. The studies combined desk research with reviews of budget and financial planning documents and key respondent interviews with government officials, aid donors, and NGOs. While country experience varied enormously several recurrent themes emerge from the country studies. Perhaps most importantly, there is a growing awareness among policymakers of the multi-dimensional role of school feeding programmes. This was reflected both in official policy documents and stated ambitions for coverage and financing. Governments vary in the degree to which strategic policy goals for school feeding have been embedded in financial planning and budgets, and in their approaches to equity and targeting. One of the concerns identified in some country studies was a misalignment between school feeding goals and financing provisions.

Part 5 offers some reflections on priorities for the SFI and the School Meals Coalition. We identify several areas that merit further research and policy engagement, both nationally and internationally.

1. The “triple crisis” in education: less learning, more poverty, worse nutrition

The COVID-19 pandemic has left the world facing profound setbacks in human development. While elderly adults bore the brunt of the immediate health impacts, children have been left with long-term scarring effects. In the absence of effective countermeasures, some of the deepest scars will be left by learning losses linked to rising social disparities in education.

Even before the school closures prompted by the COVID-19 pandemic, the world was off-track for achieving the targets enshrined in Sustainable Development Goal 4 (SDG4), which targets quality education for all by 2030. Learning indicators were stuck at desperately low levels. Over half of ten-year-olds were living in “learning poverty” – unable to read a basic text (World Bank 2019b). Across 32 low- and middle-income countries surveyed by UNICEF, just 30 percent of Grade 3 pupils achieved the basic reading competency they should have acquired by Grade 2, falling to 18 percent for numeracy. Early grade deficits were setting the scene for wider learning failures. The Education Commission estimated that by 2030 just four out of ten secondary school pupils would graduate from national education systems with secondary-level learning skills (The International Commission on Financing Global Education Opportunity n.d.). Meanwhile, poverty and learning deficits were – and are – contributing to high dropout rates. Over 250 million children were out of school in 2019 (UNESCO Institute for Statistics (UIS) 2019). Inequalities linked to wealth, gender, ethnicity, rural-urban divides, and other markers for disadvantage were acting as a powerful brake on progress towards the SDG targets (Rose, Arnot, Jeffery, and Singal 2021).

This was the backdrop to what the UN Secretary-General has described as “the largest disruption of education ever” (UNESCO, UNICEF, and World Bank 2021). The consequences of the disruption are now becoming more visible. Emerging evidence points to unprecedented learning losses, with poorer children left behind. As schools have re-opened, children are returning carrying the triple burden of lost learning, increased poverty, and rising malnutrition – perfect storm conditions for large-scale reversals in education.

Lost learning and rising social disparities

Governments responded to COVID-19 by closing schools as a public health measure aimed at limiting transmission of the virus. At the height of the pandemic, over 1.6 billion children

were affected by classroom closures. As of March 2022, two full years after the pandemic started, 400 million children were living in countries yet to fully re-open their schools (UNICEF 2022). As children have returned to their classrooms, the full extent of learning losses has become increasingly apparent – as has an increase in learning disparities.

Schools in developing countries closed for longer than in rich countries (UNESCO, UNICEF, and World Bank 2021). In the eighteen months to October 2021, classrooms in Africa were on average closed for 128 days – twice the duration reported for high-income countries. In the year after the pandemic, in-person teaching virtually disappeared across much of Latin America and South Asia.

The data now available is partial, but there is a growing body of evidence pointing to learning losses and widening learning disparities. One study looking at evidence from 20 countries concludes that average learning losses were equivalent to around one-half a school year, with the greatest losses reported in South Africa, Mexico, and Brazil. Fifteen of the studies found greater learning losses among student from lower socio-economic backgrounds. In Mexico the standard deviation in learning outcomes was three times the average, implying that the loss of almost one year of in-person teaching meant that pupils learned almost nothing. Most studies observed increases in inequality (Patrinos, Vargas, and Carter-Rau 2022).

Limited and unequal access to remote learning opportunities contributed to overall losses and observed disparities. Even in South Africa, only 9 percent of households reported access to the internet for remote learning (National Income Dynamics Study (NIDS) 2021). One study in Ethiopia found that rural areas were poorly served relative to urban areas, while access to radios and mobile phones was associated with household wealth (York, Rose, Hagos, and Woldehanna 2020). School closures fundamentally shifted learning trajectories for both urban and rural students in Grade 4, with learning progressed at less than half and one third respectively of the anticipated pace for urban and rural pupils (RISE Programme 2021).

Even where remote learning was available not all children were able to benefit. Children in the poorest households suffered not just from inadequate access to learning infrastructure, but from the effects of parental illiteracy and poverty-related factors, including household space and labour demands. In Sao Paolo state, Brazil, where 80 percent of students reported access to remote learning, one evaluation found that test scores fell during the 2020 academic year by 0.32 standard deviations, implying that children learned only around one-

quarter of in-person learning outcomes. Dropout rates in secondary school tripled to over 30 percent (Lichand, Doria, Leal-Neto, and Fernandes 2022).

Global estimates for learning losses point to dramatic setbacks over a two-year period. The World Bank now estimates that the share of 10-year-olds unable to read a simple text has increased to 70 percent. Based on learning data for 12 countries, UNICEF analysis suggests that one year of lost learning would result in a two-thirds decline in the share of Grade 3 children achieving foundational reading competency, to around 10 percent (UNICEF 2022).

Learning surveys reinforce the core findings of modelling estimates. In Bangladesh, adolescent girls" literacy and numeracy scores declined by more than 6 percent during the pandemic (Sajeda, Hossain, and Ainul 2021). The 2021 UWEZO survey in Uganda found that the proportion of non-readers in 3rd grade was double that of 2018 (National Learning Assessment Report 2021).

Children not only missed out on learning that would otherwise have happened, but lost competencies gained, but not fully mastered, in earlier years. In Malawi, public schools were closed for seven months during the pandemic. Drawing on a robust longitudinal data set for Grade 4 pupils, researchers at the World Bank found that the average learning loss across math, the local language, and English was equivalent to around two years lost learning at pre-pandemic levels (Asim and Singhal 2022).

These learning effects are potentially cumulative. Modelling in one study for learning losses with data drawn from early grade reading assessments in five sub-Saharan African countries – Ethiopia, Kenya, Liberia, Tanzania, and Uganda – estimates that COVID-19 school closures led to the loss of half-a-year's learning. For a child in grade 3, that loss could lead to 2.8 years learning loss by grade 10 (Angrist et al. 2021). The modelling assumptions may prove optimistic. Evidence from South Africa suggests that primary school pupils lost a full year of learning development between March 2020 and June 2021 (NIDS 2021).

Getting left behind – the pandemic has magnified learning disparities

COVID-19 school closures have consistently magnified learning disparities. As the authors of a Centre for Global Development (CGD) review of evidence from 29 studies conclude: "Learning loss was consistently much higher among students with lower socioeconomic status…even in contexts with little or no average learning loss. In other words, the

pandemic consistently boosted learning inequality." That conclusion holds even for countries not reporting average learning losses (perhaps partly because they were starting from a desperately low base):

- In Bangladesh, learning losses among girls were strongly associated with poverty and access to televisions, with the poorest girls experiencing a loss translating that was three times greater than their non-poor peers (Population Council 2021).
- A survey in Greater Accra, Ghana, controlling for demographic characteristics and pre-pandemic learning outcomes, documented marked disparities in children's literacy and math test scores between children in public versus private schools, with those from food insecure and lower social-economic status families being left behind (Wolf et al. 2022).
- Interrogation of the UWEZO data for Uganda found that overall gains between 2018 and 2021 masked widening gaps between poorer students and their peers. The decline in the proportion of children who can recognize letters appears to be about 5 percentage points greater among poorer pupils (Sandefur 2022).
- The Sao Paolo study cited above reported dropout rates in secondary school tripling to over 30 percent, with Black children and those from poorer backgrounds the most affected (Lichand, Doria, Leal-Neto, and Fernandes 2022).

Dropout – a growing threat

Evidence on dropout is limited – but here too the warning signs are apparent. The CGD study cited above looked at evidence on dropout rates from 15 studies comparing pre- and post-COVID enrolment. In some cases, the reported effects are very large, with lockdown measures reducing the probability of children attending school after reopening.

The negative impact increases with children's age and is in some cases correlated to gender. In Nigeria, school enrolment was 8 percentage points lower in 2020 when schools re-opened, with potentially larger effects for girls aged 12-18 in the northwest of the country linked to child marriage (Dessy, Gninafon, Tiberti, and Tiberti 2021). One longitudinal survey in Kenya found that rural secondary school-age girls were three times more likely to drop out of school and had twice the risk of becoming pregnant prior to school completion relative to pre-COVID-19 learners (Zulaika et al. 2022). In South Africa a household survey of adult respondents found that an additional half-million children had dropped out of school, pushing attendance to a 20-year low. The highest dropout rates were reported for children from poorest households and rural areas (NIDS 2021).

Reduced school participation is associated with marked gender effects. For adolescent girls, being in school greatly reduces the risk of child marriage. Conversely, being out-of-school increases that risk, especially for girls from poorer households (Population Council 2014). The evidence from a broad group of countries suggests that when poor households are hit by an external shock, families may take the decision to discontinue education for adolescent children or – as in the case of Nigeria – those above compulsory school age (Orrnert 2018, and Woldehanna and Hagos 2015).

The underlying drivers of rising inequality vary across and within countries – but several recurrent themes emerge. To the extent that remote learning mitigated the effects of school closures, children who are poor, living in rural areas, and female faced more restricted opportunities. For children who were first generation learners, parental illiteracy or lack of education may have limited the scope for home support. In contexts where the pandemic disrupted livelihoods and exacerbated poverty, household food insecurity, and vulnerability, children – especially adolescent children – faced demands for household labour or work outside the home, limiting the time for schoolwork and increasing the risk of school dropout.

Poverty and malnutrition

Learning losses associated with school closures during COVID-19 cannot be considered in isolation. They interact with wider trends, including slowdowns and reversals in the reduction of child poverty and malnutrition – two of the greatest barriers to effective learning.

Children figure prominently among the "new poor" created by the COVID-19 pandemic. As the economies of developing countries slowed and livelihoods were disrupted by lockdown policies, extreme poverty reduction, already slowing before the pandemic, increased in 2020. World Bank projections pointed to further increases in low-income countries and sub-Saharan Africa in 2021 (Mahler et al. 2022).

Using national poverty thresholds, research by UNICEF and Save the Children estimated the effects of the economic slowdown on child poverty (UNICEF 2021b).[ii] Children already living in monetary poverty were more likely to be pushed further below the national poverty threshold, while 60m additional children fell into poverty. Using a broader indicator of multidimensional poverty measured by monetary poverty and deprivation in at least one indicator for health, education, nutrition, water and sanitation, and shelter, the number of children affected rose from 47 percent to 52 percent – an increase of 100 million.

One symptom of rising poverty and deprivation is the increase in child labour reported by the International Labour Organization in 2021 (ILO and UNICEF 2021). Much of the increase occurred in sub-Saharan Africa, where one-quarter of children are now involved in child labour. The report documented a worrying increase in child labour among 5-11-year-old children, with almost half of the 89 million labourers in this age group involved in hazardous work strongly associated with being out of school. The conclusion tells its own story: "What the report tells us is alarming. Global progress against child labour has stalled for the first time since we began producing global estimates two decades ago." The findings are certainly alarming for education given the close association between child labour and non-attendance at school. Over one-quarter of 5–11-year-olds and one third of 12-14-year-olds involved in child labour are out of school.

Hunger among schoolchildren – an invisible crisis

Child malnutrition is a close cousin of extreme poverty, but more prevalent. The impact of malnutrition on school-age populations is intrinsically difficult to track, partly because international agencies and national statistical authorities tend to focus on early childhood and the "first 1000" days. This is a critical period for cognitive development and has a profound bearing on learning prospects for children once they have entered school. Key indicators for this period included under-5 stunting and wasting, which are routinely included in Demographic Health Surveys and other data sources. However, the transition from birth to adulthood takes place over "8000 days" (Bundy et al. 2017). Nutrition during the primary school years, adolescence, and the teenage years is also critical for child health – and for learning outcomes. Hunger and micronutrient deficiency limits cognitive development at all ages and is a barrier to concentration in classroom. It profoundly effects outcomes from investment in education. Unfortunately, "8000 days" data remains relatively sparse, despite its profound relevance for learning and investments in education.

Early adolescence is a key phase for promoting lifelong healthy behaviours, including good dietary practices. The growth spurt that occurs around the transition from childhood to adolescence around puberty is marked by the rapid development of muscle and organ mass, and is a period of high dietary demand (Ibid). For all these reasons, targeting primary school-age and adolescent children for nutritional support should be seen as a priority for public health and education, as well as an expression of child rights (Ibid). As one set of commentators puts it: "Just as babies are not merely small people, they need special and different types of care from the rest of us, so growing children and adolescents are not merely short adults. They too have critical phases of development that need specific

interventions, especially in the phases of pre-puberty, puberty, and during late adolescence." (Bundy et al. 2017, Intro.).

Developments during the COVID-19 pandemic had detrimental consequences for child nutrition – and, by extension, for education. The UN Food and Agricultural Organization's *State of Food Security and Nutrition in the World Report* 2022 reported an increase of around 12 percent in the prevalence of undernutrition between 2019 and 2021, along with increases in food insecurity and the share of the world's population unable to afford a healthy diet. These trends reflected the combined effects of economic recession, food price inflation, climate-induced disruption, and conflict.

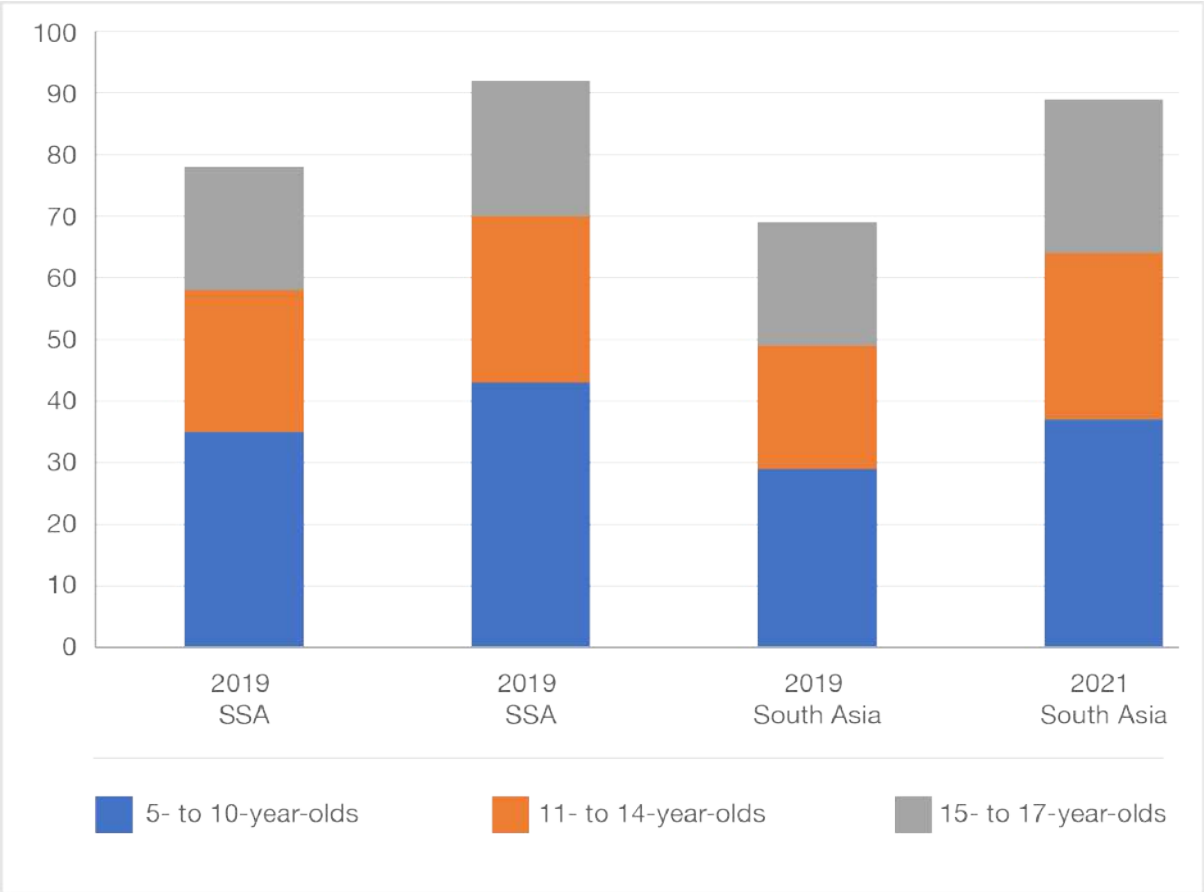
The deteriorating global environment for malnutrition has left its mark on the "first 1000 days" period. In 2020, 149 million children in developing countries – around one in five – were stunted (meaning their height was low for their age). Accelerated progress is needed to bring the 2030 SDG target within reach. Instead, the Joint Malnutrition Estimates report warns: "These numbers may increase substantially due to constraints in accessing nutritious diets and essential nutrition services during the COVID-19 pandemic" (UNICEF, WHO, and World Bank 2021, 2). Modelling work on under-five nutrition has highlighted the potential for significant increases in stunting, potentially reversing gains since 2000 (Headey et al. 2020).[iii] One analysis, based on these estimates losses in GNI per capita applied to 118 LMICs, suggests there could be a 14 percent increase in the prevalence of moderate or severe wasting among children younger than 5 years due to COVID-19-related effects (Ibid). It remains to be seen whether these plausible outcomes materialise – but the risks for child health and education are evident.

While there is no unified source for tracking the nutrition of school-age children, a partial data window can be constructed from FAO and UN World Population Prospects data. We take FAO's 2019 and 2021 "prevalence of undernourishment" data for Southern Asia and sub-Saharan Africa, which between them account for three-quarters of the world's undernourished population, and then apply the reported average rates to age cohorts derived from the UN. The cohorts – 5-10, 11-14, and 15-18 – roughly correspond to primary, lower secondary, and upper secondary schooling. To summarise the results captured in Figure 1:

- In 2021 there were 179 million school-age children living with hunger in 2021 – an increase of 35 million over the pre-COVID number.
- Primary school and adolescent children account for around 25 million of the increase.

- For southern Asia, the reversal of the past two years effectively wiped out the gains of the past seven years.
- Around one-quarter of Africa's school-age children are now experiencing malnutrition, with the regional prevalence rate having reversed to 2005 levels.

Figure 1: Estimated undernourishment by age cohorts: sub-Saharan Africa and South Asia, 2019-2021



Source: Regional data from FAO *State of Food Insecurity in the World, 2022* (Table 1 and 2 Prevalence of Undernourishment); Population data derived from UN Population Division, *World Population Prospects, 2022* (File Pop/02-1)

The data behind Figure 1 are at best approximations, with a possible bias towards under-estimation. The prevalence of malnutrition among school children may be different to the average regional rate. Indeed, the evidence on micronutrient deficiency among adolescent girls in South Asia and Africa suggests it is probably worse (Aguayo and Paintal 2017, Harding, Aguayo, and Webb 2018, and Jiwani et al. 2020). Around one-third of children –

some 253 million – live in countries where anaemia prevalence exceeds 20 percent (Drake et al. 2020). Moreover, linking age bands to schooling levels does not provide an entirely accurate picture of real classrooms: many children (especially girls) start school late and drop out early. Given that the social gradient in school attendance becomes steeper after the primary years as poorer children and girls drop out, the nutritional status of those not in school is almost certainly worse than those in school. Even so, with all these (and plenty more) caveats in mind, the data points unequivocally in a worrying direction.

More recent data from WFP (2022) confirms the scale of the threat to child nutrition. Ahead of the September 2022 Transforming Education Summit, WFP estimated that the global food crisis had pushed another 23 million children into acute food insecurity across eighty-two countries – a 17 percent increase.[iv]

There is a prospect of worse to come. Food price inflation has emerged as an increasingly important driver of food insecurity and as a potential source of rising poverty. Inflationary pressures evident in 2020 and 2021 have been magnified by the market disruption caused by the war in Ukraine (Amaglobeli, Hanedar, Hee Hong, and Thevenot 2022). In July 2022 the FAO's Food Price Index was 29 percent above its (already elevated) level a year earlier and over 60 percent above 2019 levels (FAO 2022). Transmission of these global trends to national markets is conditioned by levels of dependence on imported cereals and the degree to which world price changes are passed through to consumers. In sub-Saharan Africa, where food prices represent 40 percent of the average consumer basket, food prices increased by 24 percent between 2020 and 2022, with many countries – including Nigeria and Ghana – reporting very high inflation rates for domestically produced staples as well as imports (Okou, Spray, and Unsal 2022).

2. School meals programmes – a defence against learning reversals and a vehicle for recovery

In 1906, the United Kingdom adopted the Education (Provision of Meals) Act. The central aim of the legislation was to support "children attending an elementary school within their area unable by reason of lack of food to take full advantage of the education provided for them" (Par. 3). Belatedly, and after much debate, campaigning, and enquiries into the evidence, parliamentarians had acknowledged that universal education amidst endemic malnutrition was not enough to generate learning. Concern over education, hunger, and what would today be categorised as human capital opened the doors to public financing for what was seen as a public good. School feeding was established as a keystone of what became the modern welfare state, linking education to a range of health and anti-poverty interventions (Vernon 2005).

The UK experience is instructive for responses to the "triple crisis" in education described in the previous section. At the heart of that crisis is a severe and growing threat posed by the interaction of poverty and malnutrition with learning losses incurred during school closures. That threat is not equally distributed across societies. It is heavily skewed towards children from poorer households and young girls. While school meals programmes are not a stand-alone panacea for the systemic risks now facing education systems, the nutritional benefits they offer have a proven track record in improving school attendance, raising learning outcomes, and reducing social disparities.

The benefits of school feeding – human capital returns, with strengthened equity

Cost-benefit analysis provides one of the tools for assessing the value-for-money of school meals investment. Best estimates point to returns in a wide range between $7 to $35 per every $1 invested (Verguet et al. 2020). That aggregate estimate captures the benefits to individuals and societies of the increased school participation and improved learning accounting associated with school feeding.

There is very large literature on school feeding programme effects grounded in project and programme evaluations, and modelling work.[v] While the reported outcomes vary

enormously depending on context and programme design, the checklist includes results with an obvious relevance to the current crisis, including:

- **Increased enrolment and school participation:** A synthesis of evaluations from 20 poorer developing countries concluded that school feeding programmes "have strong positive effects on primary school enrolments, particularly in areas of high food insecurity." (WFP 2020). Another synthesis documents statistically significant impacts on school attendance among school meals recipients relative to control groups (Dongqing, Shinde, Young, and Fawzi 2021). One meta-analysis of school meals programmes across 32 sub-Saharan countries found that school meals combined with take-home rations (THRs) increased the enrolment of girls by 12 percent. School meals programmes can influence parental decisions on whether to send children to school by reducing the costs of feeding children at home, lowering the perceived opportunity cost of education. The improved learning outcomes associated with school feeding can also reduce the risk of dropout and encourage parents to keep children in school.

- **Improved learning:** While the data on learning outcomes is more variable, there is a consistent pattern of larger effects in contexts marked by high levels of food insecurity and low school participation (Snilstveit et al. 2015). One study examining fifteen different interventions found that only one (structured pedagogy) generated higher returns to learning in sub-Saharan Africa (Bashir, Lockheed, Ninan, and Tan 2018). An evaluation of India's Midday Meals scheme midday meals found positive effect on learning achievement: children with up to 5 years of primary school exposure improved their test scores by approximately 10-20 percent (Chakraborty and Jayaraman 2016). An evaluation in Ghana using longitudinal data found improvements in average learning (Alderman et al. 2021). Randomised trials covering the impact of school feeding programmes on maths scored among girls in camps for displaced populations in Uganda, and in Jamaican primary schools found positive results (Kazianga, de Walque, and Alderman 2012, Powell, Walker, Chang, and Grantham-McGregor 1998).

- **Equity effects:** With their distinctive focus on children, school meals programmes may be more effective than alternative social protection measures targeting households for cash or food transfers, by directly reducing hunger and lowering education costs (Akresh, de Walque, and Kazianga 2013, Björkman-Nyqvist 2013).

Children from the poorest households are likely to benefit disproportionately from free meals because their value will represent a higher share of their household's budget, with an associated steeper decline in the opportunity costs of education (Aurino 2020). School feeding can also increase the participation of girls in school – and hence their learning outcomes. In Senegal, school meal interventions appear to have increased the learning of girls relative to boys for maths, but not French (Azomahou, Diagne, and Diallo 2019). In some cases, girls may benefit more from school feeding in terms of learning outcomes. This appears to have happened in Ghana (Aurino, Tranchant, Sekou Diallo, and Gelli 2019). In other cases, the learning effects are uneven. When specifically targeted to girls, school feeding programmes can produce wide-ranging effects, including reduction in child marriage and early pregnancy (Masset and Gelli 2013, Brown 2012).

- **Reduced poverty, food insecurity, and malnutrition:** The meals provided can represent a non-cash transfer equivalent to 10-15 percent of the income for low-income households on one estimate, reducing pressure on budgets hit by food price inflation and creating incentives for school attendance (Verguet et al. 2020). That represents an important contribution to consumption and a source of resilience in the face of income shocks related to drought, food price inflation, or unexpected health expenditure. Evidence from Mali and Liberia also indicates school-based feeding programs reduce the likelihood that students will be subject to child labour (Dago and Yogo 2022).[vi] Studies point to potential health gains measured by the nutritional status of children. For example, research in Ethiopia found significant gains in height-for-age scores among 10-14-year-olds in food insecure areas (Zenebe, Gebremedhin, Henry, and Regassa 2018). The study in northern Uganda using fortified foods and targeting adolescent girls found a 19-percentage-point reduction in moderate-to-severe anaemia relative to a control group (Adelman, Gilligan, Konde-Lule, and Alderman 2019).

Within this broad picture of positive outcomes, it is important to emphasise that context matters. Evaluation studies reveal marked disparities in learning, school participation, health, and nutrition outcomes (Wang, Shinde, Young, and Fawzi 2021). That is unsurprising. Outcomes inevitably depend on background levels of income, food insecurity, and child nutrition, as well as the role of the education system in translating school attendance into learning outcomes. To take an obvious example, the impact of school meals programmes on household poverty is a function of the depth of poverty, the scale of

the transfer, and the degree to which school meals programmes are integrated into wider safety nets. In Lesotho, the school meals programme is part of a web of programmes, financed with an allocation 6 percent of GDP, which has significantly reduced poverty (Boko, Dhushyanth, and Younger 2021). By contrast Eswatini's underfunded school programme is part of an underfunded and ineffective safety programme (Raju and Younger 2021).

There are many areas in which policy formulation could be steered by more evidence. Cross-country comparisons are often rendered difficult by the design of evaluation studies and uncertainties over whether programmes deliver in practice, the packages stipulated on paper in policy statements. As one recent review concluded, rigorously designed evaluation studies should include long-term follow-up studies to evaluate the impact of school feeding from primary school through adolescence and secondary school. Such studies could help design policy guidelines and approaches to implementation (Wang, Shinde, Young, and Fawzi 2021). At the same time, evidence gaps do not justify delayed action. There is more than enough evidence to justify the prioritisation of school feeding as a central element in post-COVID recovery strategies

Crossing generational boundaries and equity – evidence from India and Ghana

For all the caveats on data, the evidence of positive impacts delivered through school meals programmes is overwhelming – and growing. Recent evaluation studies of large-scale national programmes point not only to significant equity effects, but to cross-generational gains transmitted through the agency of women.

One example comes from an evaluation of India's Midday Meals Scheme (MMS), the world's largest school meals programme. Drawing on longitudinal data for 1993-2016, the evaluation found that the scheme was responsible for between 13-32 percent of the overall national reduction in stunting. More striking still, the study found that the height-for-age scores of children born to mothers who had participated in the scheme was greater (with a standard deviation of 0.40) than for non-participating mothers, with the strongest effects among the lowest socio-economic groups. Transmission mechanisms for this outcome include a range of health, education, and empowerment effects. Participation in the MMM was associated with more maternal years in education, delaying age at the birth of a first child by 1.6 years, having fewer (–0.8) children, and higher probabilities of at least four antenatal care visits and giving birth in a medical facility (Chakrabarti et al. 2021).

Another illustration of equity effects comes from the Ghana School Feeding Programme (Alderman et al. 2021). This started in 2005 as an effort to improve school participation rates. In 2012 the programme was retargeted towards the (poorer) northern region and children in households living below the poverty line, and children living in areas marked by high levels of food insecurity.

An evaluation of the retargeted programme found moderate improvements in average learning as measured by test scores for maths and literacy. But the increase for children living below the poverty line – around 0.8 learning adjusted years of schooling (LAYS) – was double the average. Areas marked by food insecurity and girls also registered higher than average learning outcomes, suggesting that the programme was increasing human capital while lowering a steep social gradient in learning (Ibid). Exposure to school feeding had no effect on nutritional indicators for the whole sample, but significant effects on height-for-age scores for girls and children living below the poverty line. This is another rare example of a policy intervention delivering on the SDG pledge to "leave no one behind" in the pursuit of the SDG ambition of education for all.

These two programmes illustrate the potential for school meals programmes to generate multi-dimensional benefits. In both cases improved learning outcomes are associated with a mixture of school participation, nutrition, and health effects. As the India evaluation demonstrates, those effects cross generational boundaries. The equity effects captured in the Ghana study are important not because the provide a rare example of a policy translating into practice the SDG principle of "leaving no one behind" in the pursuit of education for all. They also point strongly in the direction of cross-generational benefits, since the higher incomes associated with improved learning is a potential catalyst for breaking the transmission of poverty across generations.

The fuller cost-benefit case for investment in school feeding is still evolving. One area where more evidence is needed is on the impact of home-grown school feeding (HGSF), the practice of sourcing school meals from local producers, which has the potential to broaden and deepen the benefits of programmes. By linking schools – and schoolchildren – to local agriculture, HGSF can provide children with nutritious fresh foods, and smallholder farmers with an important market. Evidence from Ghana and Nepal shows that HGSF programmes provided children with more diverse and healthy diets than were available more widely (Singh and Fernandes 2018, Shrestha et al. 2020). More broadly, schools supplied through HGSF programmes may provide more diverse diets than those receiving food donated as in-kind support (Wineman et al. 2022).

Some of the world's largest and most successful school meals programmes for example have integrated HGSF into national strategies. Examples include Brazil, India, and Nigeria. However, there are potential trade-offs and tensions between strategic public policy goals. Expanding the reach of school meals programmes might require an emphasis on low prices, which may not incentivise local production. The distribution of benefits along the value chain, between smaller and larger farmers, traders, and canteen operators, can confront policymakers with political economy challenges and potential trade-offs between different objectives.[vii] At the same time, HGSF provides a regulatory tool through which governments can promote healthy diets in schools while creating markets for local agriculture. Under the right policy conditions, school meals can act as part of a wider set of interventions aimed at supporting more self-reliant and more sustainable food systems. Current debates over climate change, food security, and healthy diets point to the potential for an expanded role for school feeding programmes.

School meals programmes can also play a role in combating the double-burden of obesity and overweight co-existing with high levels of malnutrition. Over one-third of low-income countries (LICs) and lower-middle-income countries (LMICs) have a high prevalence of under-nutrition (with stunting rates exceeding 30 percent) and overweight (over 30 percent) (Seferidi et al. 2022). By providing schoolchildren with a more diverse, nutrient-rich diet, school meals programmes can address the double burden of malnutrition, especially when linked to education about healthy diets.[viii]

3. Current reach, provision, and financing

The COVID-19 pandemic brought to a sudden halt a sustained expansion of school feeding programmes. As schools have re-opened, governments have faced the challenge of restoring and expanding school feeding programmes in a dramatically changed fiscal environment. That environment, and how governments respond to it, will have a major bearing on prospects for financing the $5.8 billion plan advocated by the School Meals Coalition aimed at restoring school feeding programmes disrupted by COVID and extending them to an additional 73 million children in LICs and LMICs (WFP 2021). Using a range of deprivation filters, research has identified 73 million children as being in the most urgent need (Drake et al. 2020). Financing these programmes would require an additional $5.8 billion annually.

Coverage and costs

The WFP's *State of School Feeding* report (2021) provides the most comprehensive snapshot of the baseline for the pre-pandemic reach and financing of the school feeding provision. This section draws on that snapshot, supplemented by the annual survey of school meals programmes carried out by the Global Child Nutrition Foundation (GCNF 2022).

The overall picture to emerge for the pre-pandemic period is one of gradually increasing coverage and a move towards more self-reliant financing. In the decade to 2020, LICs and LMICs increased by 36 percent and 86 percent respectively the number of children covered. Some 53 million children in sub-Saharan Africa and 107 million in South Asia were receiving school meals before COVID-19 struck. Despite this expansion provision remains most limited where the need is greatest. Only around 20 percent of school children in LICs and 45 percent in LMICs receive school meals. Moreover, these averages obscure very large disparities. Large LMICs and even middle-income countries with very high prevalence rates for malnutrition – such as Indonesia and the Philippines – have levels of coverage well below the average, as do several LICs (WFP 2021, 51).

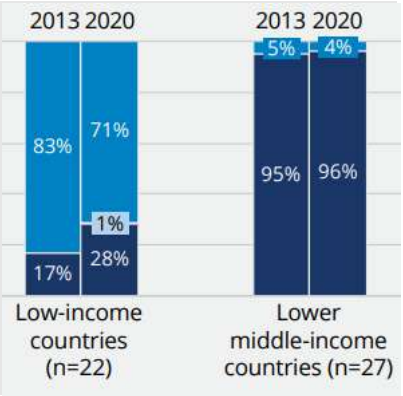
The expansion of programme coverage has gone hand-in-hand with a broadening of policy goals. While most of the public finance for school meals programmes has flowed through education budgets, government policies reflect a growing awareness of the multi-sectoral benefits across education, health and nutrition, social protection, and – increasingly – engagement with local agriculture (Dapo-Famodu 2021 and GCNF 2019). Over 90 percent of the 85 countries covered in the 2019 GCNF survey included education goals as an objective (Ibid), with almost two-thirds combining school feeding with a package of more than four additional health and nutrition interventions.

Translating school feeding targets into budget priorities starts with an estimate of costs. The WFP's *State of School Feeding* report shows that these rise at lower levels of average income, to $55 per pupil in low-income countries from $41 per pupil in LMICs. Simple budget arithmetic indicates that the fiscal burden of expanding coverage weighs more heavily on poorer countries with lower current coverage rates. That burden can be illustrated by reference to data on education budgets published by the World Bank and UNESCO (2021). The average pupil cost of school meals in LICs, where education spending averages 3.5 percent of GDP, exceeds total per pupil spending in education ($51). For

LMICs, where education spending averages 4.3 percent of GDP, the average cost of school meals represents 14 percent of per pupil education funding ($276 in 2018/2019).[ix]

Financing profiles point to a sustained effort on the part of developing countries to combine expanded coverage with increased self-reliance. The vast bulk of school meals financing in developing countries comes from national budgets, with LMICs covering 90 percent of the costs from their own resources. LICs have also increased the domestic share of financing since 2013, despite the budget constraints they have faced. Even so, donors account for almost three-quarters of school meals programme financing in these countries (Figure 2).

Figure 2. School meals financing: donor and national budget shares



Source: WFP *State of School Feeding*, 2021

Delivery of school meals programmes requires that targets for delivery are backed by well-defined budget allocations and effective budget execution. In the absence of clear budget lines there is an obvious risk that targets set by one ministry (social welfare or education) may get little traction in the real financial processes and budget allocations overseen by other ministries (finance and planning, for example). As Kenya's national strategy document puts it: "A stable government budget, domiciled on firm legal framework to avoid reallocation, is a pre-requisite, even if such a budget does not suffice to cover all required costs for providing school meals to all school children." (Government of Kenya n.d.). That observation is borne out by evidence from WFP surveys and the Global Survey of School Meals Programme, which found a strong association between the coverage of school meals programmes and the presence of a national budget line.[x]

Translating school feeding programme goals into credible budgeting is a potential source of political friction. In some countries that friction is reflected in disputes between caterers and government authorities over the costs of delivering the food baskets stipulated in

government guidelines. Caterers in Ghana often reduce the quantity or quality of food provided to schools in response to delayed transfers from central government (Aurino et al. 2020). An evaluation in Eswatini found a 50 percent gap between actual procurements and the food baskets stipulated in guidelines (Gandure, Sacolo, and Silaula 2019). That may represent an extreme case – but shortfalls are not atypical. In some cases, weak budget execution leads to delayed payments to caterers, which in turn diminishes delivery.

Fiscal space is shrinking

Many developing country governments adopted bold targets for school meals programmes before the COVID-19 pandemic. The fiscal environment for financing delivery has now deteriorated. In marked contrast to the situation after the 2008 global financial crisis, when developing countries recovered strongly and entered a period a sustained growth, the post-COVID-19 environment has been marked by a two-tier recovery, with many of the poorest countries facing reduced growth prospects, diminished revenue flows, and rising debt service obligations.

The resulting budget pressures are evident in education, which is the usual channel for school meals financing. Around 40 percent of LICs and LMICs reduced their spending on education with the onset of the pandemic in 2020, with an average decline in real spending of 13 percent. The share of education in budget spending rebounded in 2021, but the respite appears to have been temporary: the share fell again in 2022 and remains below 2019 levels (World Bank and UNESCO 2022).

External debt servicing has emerged as a mounting constraint. Although debt ratios are lower than in the mid-1990s, they are rising fast, and the composition of creditors makes debt reduction more difficult. The external debt stock of LICs and LMICs rose by some 12 percent in 2020, leaving almost two-thirds of IDA-eligible countries either in, or at risk of, debt distress.

While debt distress is typically measured by reference to exports and GDP, a more immediate indicator of relevance to school meals financing is the share of government revenue allocated to debt servicing. This was growing before the pandemic. With rising interest rates, reduced revenue collection, and slower growth, debt servicing is now crowding out key social investments. In 2020, over half of the countries eligible for the Debt Service Suspension Initiative (DSSI) in 2020 were spending more on debt servicing than health (Watkins 2020). The median debt service to tax ratio is expected to remain above the

pre-pandemic levels and exceed 40 percent in several highly indebted countries, including Ghana and Nigeria (IMF 2022d).

Debt relief is one pathway towards an expanded fiscal space – but the route has been blocked by the absence of a multilateral debt reduction framework. The debt profile of IDA-eligible countries has changed over the past decade, principally through the increased weight of commercial debt owed to bond holders, banks, and trading companies. These creditors are not covered by existing mechanisms. The DSSI provided for a limited and temporary suspension of debt servicing (though not debt reduction); efforts to negotiate a Common Framework through the G20 have yet to bear fruit.

Governments can also expand fiscal space through increased revenue collection. The IMF estimates that the average LIC and LMIC has the capacity to sustain a 23 percent tax-to-GDP ratio. Most are some distance from this tax "frontier": the current average for LICs is around 17 percent, rising to 20 percent for emerging markets (Benedek, Gemayel, Senhadji, and Tieman 2021).[xi] However, current circumstances are not propitious for reaching this frontier. Reduced growth and revenue projections suggest that fiscal adjustments will occur principally through lower-than-expected spending, rather than revenue mobilisation. On average, government revenues in LICs were 1.5 percent of GDP lower than projected in 2021, and output 6 percent lower (IMF 2022a).

The war in Ukraine has compounded the already difficult fiscal environment facing many of the world's lower-income countries. Rising fuel and food prices will add to spending pressures by driving up the cost of subsidies and safety net spending. Growth projections for oil-importing countries have been revised downwards, suggesting a brake on recovery from the pandemic. Rising interest rates, widening spreads on emerging market debt, and the backdrop of rising debt distress limit the scope for debt-financing through hard currency government bonds and borrowing.

This backdrop has implications for the financing of school meals programmes. The emphasis in lower-income countries has shifted from the mildly expansionary fiscal policy during the pandemic, towards reducing fiscal deficits. Most countries have limited fiscal space to provide a buffer against new shocks triggered by the war in Ukraine and food price inflation. While national contexts vary enormously, the general conclusion reached by the IMF's Fiscal Monitor in April 2022 captures the constraints now facing governments in lower-income countries: "scarring from the pandemic, more expensive food and energy imports, risks of social unrest and tighter financing constraints in the developing world will

make meeting the United Nations Sustainable Development Goals even more challenging." (IMF 2022a).

Progressive universalism – a guiderail for policy

The fiscal stress now playing out in countries seeking to restore and expand school meals programmes raises wider policy questions. Should governments aim at universal provision or more targeted interventions weighted towards children facing the most acute disadvantages?

There are no easy answers to that question. In practice, most countries have adopted some form of targeting. All the countries covered in the GCNF survey reported provision for primary school pupils, with a marked drop for secondary schools: just under one-half and one-third respectively of LICs and LMICs reported secondary school provision. To the extent that poorer children account for a higher share of the primary school population than for the secondary school population, this is a mildly progressive spending pattern.

Other forms of targeting are common. Many governments limit programmes to all public schools, which has the effect of excluding children from higher-income households in private education (Boko, Dhushyanth, and Younger 2021). Geographic targeting is used to concentrate resources in areas marked by high levels of deprivation. For example, Kenya's school meals programme serves 1.6 million children in arid and semi-arid areas. The National School Nutrition Programme in South Africa uses school-based targeting to reach children from the poorest three wealth quintiles in primary and secondary schools (Basic Education Republic of South Africa 2022).

No targeting approach is immune to potential drawbacks. Geographic targeting can bypass poorer children living in wealthier areas. Index-based deprivation mapping is as good as the underlying data, which in many countries is limited and poor. Focusing on primary provision will bypass children from poorer households who progress to secondary schooling. The administrative complexity and transaction costs associated with targeting is another consideration. To the extent that wider safety net and social protection programmes successfully identify and reach deprived households, they can provide a delivery platform for school meals targeting – though the strength of safety nets is likely to be inversely related to the coverage and need for school meals programmes.

Wider political economy factors are also relevant. As Amartya Sen argued over thirty years ago, the beneficiaries of "poverty targeting" tend to be politically weak, which in turn limits

their capacity to assert financial claims (Sen 1992). That argument has lost none of its force. Targeted programmes serving the poor may garner limited public support precisely because a small segment of the population benefit, while the costs are widely dispersed (Fiszbein et al. 2009). Advocates for targeting rightly point out that, for any fixed budget, universal provision will spread benefits more thinly than targeted interventions, limiting transfers to those with the greatest needs. The counter-case of advocates for universal provision counter that budgets are not fixed even in low-income settings, and that expanding the range of beneficiaries can build a constituency for support, also has merit (Kidd 2015).

"Progressive universalism" provides a public policy bridge across the divide between universal and targeted approaches (Gwatkin and Ergo 2011). While recognising the validity of universal provision, the concept captures a core principle of equity – namely, that the most disadvantaged should be first in line for support. As the introduction to the SDGs puts it: "we will endeavour to reach the furthest behind first" (UN General Assembly 2015, Intro). The SDG framework also points to another key equity principle related to the 2030 goals. If all sections of society are to reach a shared target at a fixed point in time, progress must be fastest for those furthest from the goals. Achieving that outcome in an area like education or child health is likely to require a higher level of financial support for the poor than for the non-poor.

School meals programmes cannot be viewed in isolation. Well-designed and properly funded programmes can deliver extraordinary results, but they cannot substitute for effective and equitable social protection, education, and health systems. They work best when integrated into these systems and linked to measures that deploy the force of progressive public financing to mitigate structural disadvantages.

Financing school meals programmes in a shrinking fiscal space – the options

The fiscal context and aid environment is not conducive to a high-level of ambition for school meals programmes, yet the investment case could hardly be more compelling. The case for the $5.8 billion a year in additional financing advocated by the School Meals Coalition is rooted in the immediate needs of millions of children, the threats posed by the "triple crisis" in education, and the vital importance of a learning recovery to build human capital in countries at risk of being left behind. In an increasingly difficult SDG financing environment, investment in school meals programmes offers the prospect of high returns for people and countries.

There are no blueprints for increased school meals financing. There are, however, some broad approaches through which the case for school meals programmes could be embedded in broader approaches aimed at mobilising additional financing. The balance national financing and donor support must be determined on a country-by-country basis. As an obvious rule of thumb, more aid is likely to be required in countries with lower incomes and more limited current school feeding coverage. For illustrative purposes, it might reasonably be assumed that national governments and donors could underwrite a global financing strategy on a 50:50 basis, with governments mobilising new and additional resources. The checklist of public finance options available would include the following elements:

Improved efficiency: The per capita costs of school meals programmes vary widely around the average figures cited earlier. For illustrative purposes, one study using cost estimates for a standardised package of calorific content found that the lowest cost provider (India in this case) was able to deliver at one quarter of the average cost in a review covering 13 school feeding studies and 23 pre-school studies (Kristjansson et al. 2016). Other studies have also documented marked cost differences.[xii] *The State of School Feeding* report documents a differential of eight between costs for the lowest- and highest-cost provision in LICs (out of 29 countries). Some of the cost differentials can be traced to food price divergence, wage costs, demography, and geography. However, efficiency factors also come into play, including the costs of administration, logistics, storage, and delivery infrastructure.

Increasing general tax revenue: While fiscal space may be shrinking in general, most lower-income countries have some opportunities to expand government funding through progressive taxation, the removal of personal and corporate tax exemptions, and measures to reduce tax evasion. For illustrative purposes, if a $2.9 billion contribution of governments were broken into financing of $0.9 billion for LICs and $1.9 billion for LMICs, it would represent an additional tax effort respectively of 0.17 percent and 0.02 percent of GDP. While the implied effort must be placed in the context of severe fiscal pressure and urgent financing needs in many areas, this would appear to be within the realms of the achievable.

Restructuring general subsidies: As cost-of-living pressures mount with rising food and energy prices, universal subsidy programmes become more costly, and less efficient and equitable. Energy subsidies represent a significant burden in many LICs, accounting for around 4 percent of GDP on average for Africa (Chuku 2021). Untargeted energy and food subsidies often constitute not just a cost on budgets but a regressive transfer. Using direct

transfers to the poorest households is an alternative – and school meals programmes offer an obvious vehicle for delivery. Transfers effected through school feeding can be targeted geographically or, in more developed welfare systems, by individual characteristics as part of a wider safety net response to rising food prices. Some countries have successfully navigated the conversion of energy subsidies into social investments. Indonesia is a stand-out example (Ibid). However, as witnessed by the experiences of several developed and developing countries, transferring general subsidies into targeted support can pose major political economy challenges.

Windfall taxes: Rising prices for energy and some commodities has created windfall gains for a small number of poorer countries, including Africa's eight petroleum exporters. Capturing these gains through taxation can help finance safety net interventions. There is a compelling case for taxing windfall gains in physical assets like petroleum exports to finance human capital assets – and school meals programmes represent an obvious social priority. However, windfall taxes come with the inevitable limitations of a fluctuating and uncertain source of revenue.

Earmarked taxes: Many countries use earmarked taxes to link dedicated revenue streams to specified spending. The UK, Ghana, and Rwanda use national insurance to finance health service provision, for example (Cashin and Dossou 2021). Countries like Mongolia and Zambia have (like Bolivia) used gas and mining taxes to fund social programmes, and Gabon has used a VAT on mobile communications to fund health programmes. The Philippines earmarks 80 percent the proceeds of a tax on offshore gaming facilities for universal health coverage and wider SDGs (Senate of the Philippines 2021). Few governments appear to earmark taxes for school meals programmes, but there are exceptions. For example, India's Midday Meals Programme, the world's largest, is part-funded by a 2 percent elementary education tax – the Prarambhik Shiksha Kosh (PSK) (Pandey and Kapur 2021).

Multilateral action: One mechanism which could change this picture is the International Finance Facility for Education (IFFEd). By providing risk guarantees linked to financing for education through the MDBs, IFFEd could leverage an additional $10 billion for education financing – including school meals. Alongside this education-specific vehicle, many commentators argue that current lending policies at the World Bank and other MDBs under-leverage balance sheets, attaching too much weight to "Triple A" ratings and too little to scaling-up finance (Ibid).

Taxing "public bads": Using taxation to deter activities that are harmful, pay for the damage they cause, and support behaviour change is a well-established principle. It is widely applied to environmental pollution and, more recently, carbon taxation. In the field of public health, taxation is used to discourage consumptions of tobacco, alcohol, and sugar-intensive diets. The latter has a very direct bearing on one of the aims of school meals programmes, which is to support the development of more healthy diets among children. More than 50 countries around the world – including India, South Africa, Mexico, Chile, and Peru – now tax sugar-sweetened beverages, which make a damaging contribution to childhood obesity (World Bank 2020, and Obesity Evidence Hub 2022). Evidence from South Africa and Kazakhstan shows that these taxes can be designed on a progressive basis, with lower-income deciles benefiting more and experiencing smaller proportional costs (Saxena 2019, and World Bank 2019a). School meals programmes providing a healthy, nutritious, and diverse diets along with education to counter obesity would appear to offer obvious public good, which could be financed by a tax on sugar- or fat-intensive products.

SDG and social bond financing: Debt distress, rising interest rates, and widening spreads on developing country bonds limits the scope for sovereign debt financing. For poorer developing countries future recourse to bond markets will inevitably entail detailed scrutiny of debt sustainability prospects. However, the rise of Environmental, Social, and Governance (ESG) investment has created some opportunities to link private capital markets to SDG financing. Social bonds broadly link revenues mobilised to specific spending areas with a defined outcome or social purpose (International Capital Market Association 2022). Mexico was the first country to issue 'sDG" bonds. Others – including Uzbekistan and Benin – have followed suit. In each case, school meals programmes have been identified as an eligible spending line for finance generated by bond issues.

This prospective menu is not exhaustive. It does not include the potential for philanthropic donors to play an expanded role – and this is a constituency which appears to be under-represented at present. Given the strength of the evidence base now available and the stated commitment of many philanthropic donors to "evidence-based" financing, there is a strong case to be made for increased engagement. Impact investment may be another under-exploited resource.

Another area for exploration is the emergence of **impact bonds and social impact funds**. These involve private investors providing up-front capital for delivering a specified service linked to an outcome which, when achieved, triggers a pay-out by a government or a

donor. It is not difficult to see how this approach could be deployed in school feeding, especially in the development of large-scale pilot programmes. The Brookings Institution tracks these impact investments. Of the 235 arrangements documented in mid-2022 (with accumulative up-front capital of $435 million) only 23 are operational in developing countries, none of them in school feeding (Gustafsson-Wright and Osborne 2022).

While these and other arrangements merit further consideration, relatively modest increases in domestic revenue mobilisation, efficiency gains in programme delivery, and an increased aid effort could support the $5.8 billion in additional financing envisaged by the School Meals Coalition. For illustrative purposes, $3 billion in new and additional development financing could be mobilised through:

- Bilateral aid on grant terms from European donors, EU institutions, and other G7 donors could provide $1 billion (equivalent to a 0.6 percent increase in DAC aid)
- IDA-terms aid through the World Bank and other MDBs could provide an additional $1 billion (equivalent to less than 1 percent of their concessional financing portfolios)
- Wider multilateral finance mobilised through IFFEd, less conservative lending, and increased bond issues to leverage the balance sheets of the World Bank and other MDBs could mobilise an additional $1 billion
- Debt relief could play a supplementary role, converting unpayable debts into investment in children by releasing government revenues.

International aid

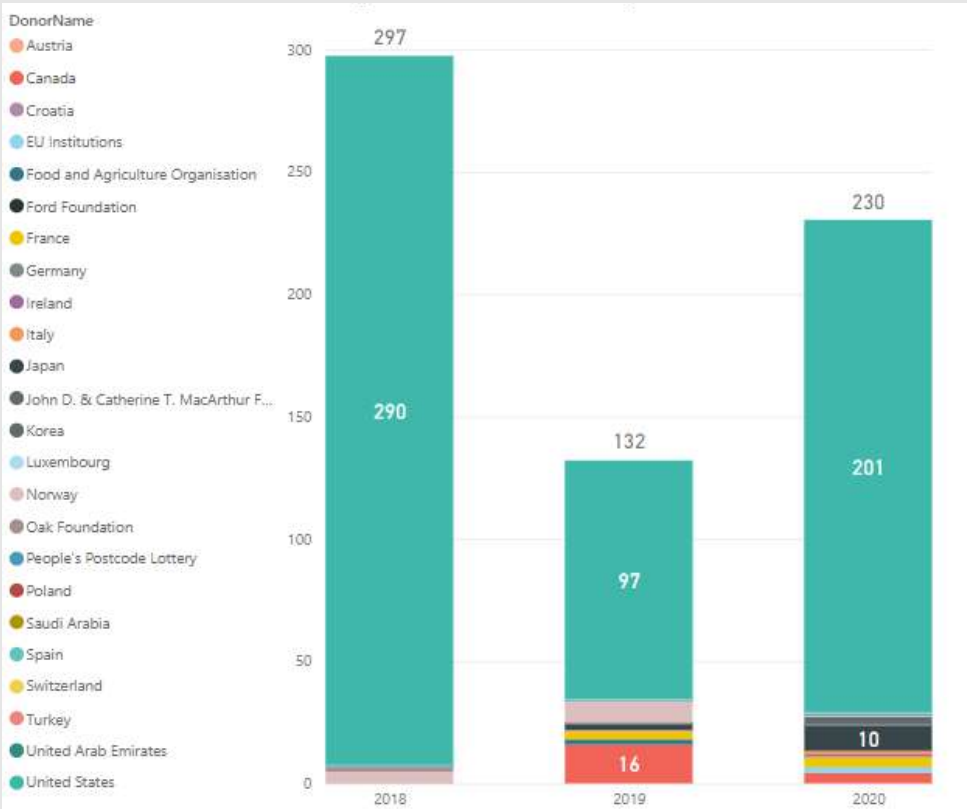
In any plausible scenario for a rapid scale-up of financing for the coverage of school meals programmes, international aid will have a critical role to play. That is especially true for LICs. But it is also true for many LMICs now facing a combination of reduced revenue and rising debt service obligations. Background research commissioned for this report suggests that we are some distance from the point where aid can play a catalytic role in supporting national financing efforts. In stark contrast to the governments of many developing countries, local communities, and millions of the world's poorest children, donors appear to attach limited importance to school meals programmes.

The data available is partial. Some aid for school feeding may be reported under other categories, including food assistance, basic nutrition, and food security. Reporting systems are also hampered by intermediation, or the transfer of funds between donors. Both WFP and World Bank projects appear to be under-reported in the current CRS system.

These limitations in the DAC reporting system are bad for donor accountability on the performance in supporting the SDGs. They also create an obstacle to the effective international cooperation that will be needed if aid is to play a more constructive role in financing school meals interventions. As a first order priority, the OECD DAC should work with donors to improve the reporting system to ensure all aspects can be counted as simply as possible.

The shortcomings of donor reporting practices should not obscure the collective failure of donors to support school meals programmes at a credible scale. Background analysis prepared for this report looked at data for 2018-2021 from the Creditor Reporting System (CRS) used by the OECD's Development Assistance Committee (DAC), which includes a dedicated line for school feeding categorised under basic education (Ali and Mackintosh, Fab Inc. 2022). Based on reported data, overall aid to school feeding from 2018 to 2020 ranged from $132 million to $297 million per year, or just 1.5 percent of aid to education (which itself fell by $359 million). Even allowing for under-reporting that represents a striking level of under-investment. Over this three-year reporting period, only nine donors gave a total of more than $1 million[xiii] Equally striking is the concentration of the aid effort on one donor programme. The USAID's McGovern-Dole Food for Education and Child Nutrition programme accounted for over 90 percent of aid to school feeding over the reporting period reviewed.

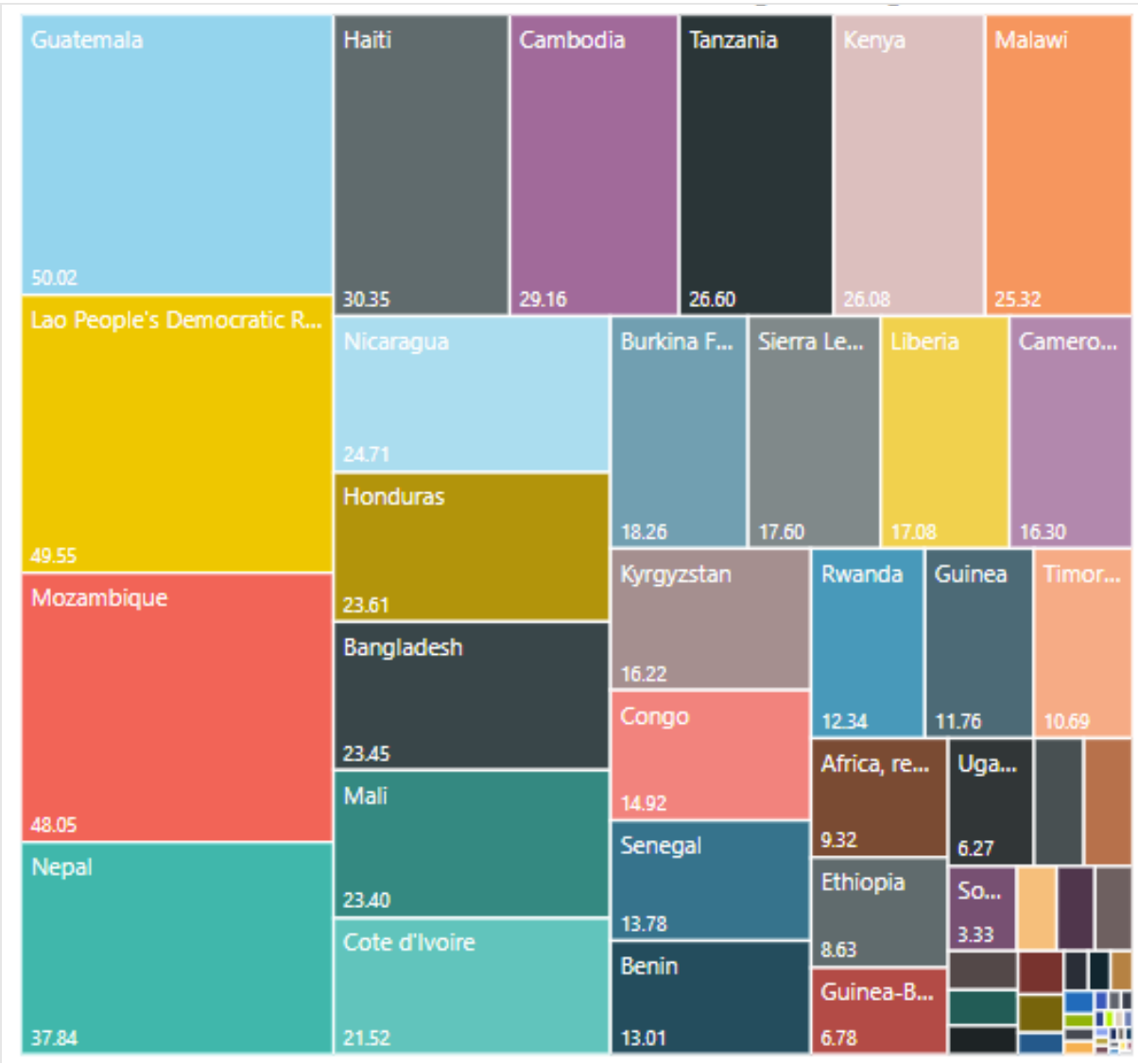
Figure 3. Reported aid to school meals programmes: OECD donors and selected organisations



Source: Ali, Yusuf and Alasdair Mackintosh. “School Meals International Donor Analysis 2022.” Fab Inc., 2022.

Fragmentation is another feature of aid provision for school feeding. The limited aid provided for school meals programmes is widely dispersed. Over 60 countries were reported through the CRS system as aid recipients, with half of them in sub-Saharan Africa and another 20 percent in Central America and the Caribbean (Figure 4).

Figure 4. School feeding aid by recipient: reported total, 2018-2020



Source: Ali, Yusuf and Alasdair Mackintosh. "School Meals International Donor Analysis 2022." Fab Inc., 2022.

The flipside of Figure 4 is a donor profile marked by the actual or planned disbursement of small amounts of aid across several countries. In effect, the current donor efforts excluding the United States resemble the grants programming of a small-to-medium sized NGO. This is illustrated by reported disbursements and commitments, as indicated in Annex 1.

There are marked differences between donors in their approach to school meals programmes, including the clarity of their strategies. The McGovern-Dole programme provides detailed project information, programme evaluations, and financial data for awards through its Food and Agricultural Services portal. That appears to be the exception to the

wider rule. Most donors provide limited and partial information though project reporting systems. To cite some of the results to emerge from a brief investigation:

- **United Kingdom**: Using the Devtracker project information site, a search of business case documents from 65 education projects found no mention of school feeding in 58 of those projects. The UK has not reported any school feeding contribution through the CRS, and there is no mention of school feeding within FCDO's key strategic documents, including its International Education Strategy, (former) DFID's Education Policy, or Girls" Education Action Plan
- **Japan**: There is no mention of school feeding in JICA's position paper on Education Cooperation, or its position paper on SDG4.
- **Germany**: There is no mention of school feeding within KFW's Education brief, nor its primary and secondary education focused brief. Similarly, in GIZ's listing of projects, the three focused on education make no mention of school feeding.
- **France**: There is no mention of school feeding within the AFD's Education, Training, Employment Strategy 2016-2020, nor within the 2019 and 2020 Education, Training, Employment Activity Reports.
- **Norway**: Nutrition is a flagship focus of NORAD, and school feeding is mentioned in the 2014 white paper on Education for Development, which includes a commitment to support school feeding in low-income and conflict-affected countries.
- **Canada**: School feeding is not included in the six examples of education assistance support activities on their website.

In each of these cases donors may be providing aid to school feeding through other budget lines, including child health, social protection, and humanitarian aid. Even so, it is evident that school feeding is not treated as a central theme in aid for education – and that coordination across sectors is limited.

Other aspects of current aid approaches would appear to merit further consideration. The McGovern-Dole program delivers aid principally in the form of surplus US agricultural commodities, supplemented by financial and technical assistance. While the programme has sought to support the development of self-reliant systems, it is difficult to square the use of US commodities with support for home-grown school feeding. The use of commodities, rather than cash, may also raise wider efficiency questions. In the case of humanitarian aid, food appears to be a distant second-best alternative to cash transfers

(Watkins 2022). Other inefficiencies in the system may include the high degree of intermediation in some programmes, with donors linked to schools through sub-contracting chains operating through UN agencies or the Global Partnership for Education (GPE), international NGOs, and their national partners.

As the largest source of development finance in LICs and a major global funder of education and nutrition, it might be expected that the World Bank would have a well-defined strategy on school feeding. The Bank's own evidence on the learning crisis following COVID-19, rising child poverty, and food insecurity triggered by inflation points unequivocally towards nutrition as a barrier to post-COVID recovery in education.

It is clear from project documents that school meals programmes figure more prominently in the World Bank's portfolio than indicated through the CRS reporting systems. These include relatively large projects for Yemen ($47m) and Kenya ($63m) – and school feeding is included as a component in several wider projects. What is missing is a clear articulation of the World Bank's approach, ambition, and strategy for financing an expansion of school feeding programmes.

The World Bank would appear to be well-placed to expand support for school meals financing. The $93 billion replenishment of IDA 20 (2022-25) was the largest in its history. This represents the biggest single-source of international development financing for sub-Saharan Africa and LICs – and health, education, and safety nets are among the stated priorities (though school meals are not mentioned), (International Development Association 2022). What gets funded through IDA is partly determined by government priorities – and it is not clear that IDA-eligible governments are integrating school meals financing into their wider requests for IDA support.

There is a case for reviewing the allocation criteria that currently steer IDA allocations (Miller, Prizzon, Pudussery, and Roger 2021). These are currently determined by two indicators: governance criteria (which dominate) and per capita income (with an inverse weighting). It is not clear that application of these criteria will reflect the crisis financing needs facing many IDA-eligible governments and the facility best geared towards flexible response – the Crisis Response Window – is underfunded. While the World Bank could do far more to expand school feeding finance, such arrangements limit the scope for flexibility.

Even allowing for the very large gaps in data and reporting systems, the current aid effort on school meals fall far short of the level of ambition needed to recover the ground lost during the COVID-19 pandemic and expand coverage. Better reporting is needed to develop a clearer picture of actual spending – but better reporting is not a substitute for

increased and more effective aid provision. Beyond the chronic under-financing and high transaction costs that come with delivering small amounts of project-based finance, the aid effort on school meals suffers from weak coordination within and across donor agencies and the absence of a clear strategic direction.

4. Lessons from rapid national assessments

The options for governments seeking to expand school feeding programmes are shaped by the national environment for public finance. As part of the overall landscape analysis, seven rapid national assessments were conducted to provide insights on the constraints – and opportunities – facing governments in countries at very different levels of development, and with marked differences in current levels of school feeding provision. The assessment studies were designed to include a brief overview of the background to national programmes, a summary of key policy goals, and a more detailed analysis of programme coverage, financing, budget provisions, and the role of aid donors.

The countries selected for the assessments were Bangladesh, Benin, Bolivia, Guatemala, Rwanda, Senegal, and Tanzania. Researchers were asked to interrogate a range of sources. These included government guidelines, budget documents, and secondary research, along with key respondent interviews with relevant line ministry, officials, donors, and implementing NGO partners. The country reports are available here.

The background – diverse starting points, varied ambition

While each of the countries has some history of school feeding there are marked differences in experience. At one end of the spectrum, Bolivia and Guatemala have highly developed programmes extending across all levels of the school system. At the other, Tanzania has a school meals policy set out in broad guidelines, but no national programme. Between these extremes, policymakers in Bangladesh, Benin, Senegal, and Rwanda are at various stages of scaling-up what were previously large-scale pilot programmes jointly implemented with the WFP. This builds on a model applied with some success in Nigeria (which has sub-Saharan Africa's largest school meal programme), Ghana, and Kenya.

The context for school feeding in each country is a marked deficit in child health and nutrition. While the track records on progress in this area are notably mixed, with some countries (Guatemala being a case in point) registering social indicators far below those anticipated on the basis of per capita income, policymakers have recognised the importance of these deficits for education. Among the indicators highlighted in the national assessments and documentation:

- Benin ranks 82nd out of 116 countries on the 2021 Global Hunger Index (GHI). Survey evidence points to intense nutritional deprivation, including high levels of wasting, and zinc deficiency among children in rural areas in the north of the country.
- Senegal ranks 66th on the 2021 GHI, pointing to a moderate level of hunger. However, surveys document marked regional variations in food security, along with acute vulnerability linked to drought, land degradation, and food prices inflation. While data on the nutritional status of school-age children is limited, there is evidence of high levels of iron and zinc deficiency.
- Representative data on the nutritional status of school-age children in Bangladesh appears to be limited. However, the 2017/2018 Demographic and Health Survey (DHS) reported high levels of stunting (32 percent) and wasting (8 percent) among under-5s. The country is also marked by high levels of zinc and iron deficiency.
- Around one in five households in Rwanda were categorised as food insecure in the 2018 Comprehensive Food Security and Vulnerability Analysis, with the western and northern parts of the country worst affected. Around one-third of under-5s were reported as stunted in a previous survey, pointing to wider nutritional problems.
- While Guatemala is an upper-middle-income country (UMIC), reported stunting levels exceed those of many LICs at 47 percent. Chronic malnutrition affects 58 percent of indigenous children under 5 years of age and 66 percent of children in the poorest quintile according to UNICEF data (UNICEF 2021a).

One of the striking themes to emerge from the case studies was the paucity of nationally representative data on the health and nutrition status of schoolchildren. Much of the data that is available is either partial or dated – or both. This would appear to be consistent with the wider neglect of the "first 8000 days" described in Part 1.

The policy environment – broad goals, variable engagement

The political environment for school meals programming varies across countries. In common with much of Latin America, school feeding in Bolivia and Guatemala has acquired an institutional standing that crosses electoral cycles and political differences. That standing is grounded in public support and highly devolved delivery mechanisms in which local communities and parents are important stakeholders. When schools closed during the pandemic, community action and a well-established delivery system made it possible to continue school meals transfers, providing an important safety net.

Evidence from the wider group of countries points to a step-increase in ambition, backed in some cases by high-level political engagement. In Senegal, President Macky Sall has identified expansion of the country's school meals programmes as a key condition for accelerated human development and progress in education. Following its election in 2016, the new government in Benin included the extension of school canteens to all rural areas of the country as a component in its national action plan for education. While national political leaders in Bangladesh have played a less prominent role than counterparts in other countries, they have provided space and financing for technical staff in the ministry of education to deliver an ambitious programme. In mainland Tanzania (Zanzibar has a different experience), school feeding appears to have attracted limited political engagement.

Policy goals in the seven countries reflect the widening international vision associated with school meals programmes. School feeding is widely identified as a lynchpin integrating education, nutrition, child health, social protection, and support for local agriculture. The objectives set out in Rwanda's policy reflect the wider picture: "all schoolchildren (should) achieve their full development potential through a sustainable school feeding programme that provides adequate and nutritious meals at school." Benin's 2017 National Integrated School Feeding Program (*Programme National d"Alimentation Scolaire Intégré* – PNASI) identifies school feeding as a point of convergence between education, health, and agricultural policy, with the improvement of academic performance a first-order priority.

Most national policies include a goal of supporting home-grown school feeding, linked to a range of nutrition and rural development objectives. In Bolivia, national laws specify smallholder and community associations[xiv] as agencies required to guarantee a stable supply of nutritious foods. In Guatemala, parent organisations are authorised to select suppliers (farmers) from an accredited list, with at least half of the food purchases made from local producers. There is no specific provision requiring demand to be met by smallholder producers. The school meals programme in Rwanda requires that all foodstuffs are purchased nationally, with the Ministry of Agriculture and Animal Resources mandated to develop local supply chains, building on a home-grown school feeding programme in operation since 2002 under WFP auspices.

There was some evidence pointing to difficulties in translating HGSF policy into practice. In Senegal, the development of linkages between schools and local producers is a policy goal, but the limited budget attached to the programme has acted as a brake on action. A 2019 evaluation for Benin similarly found that purchases from local farmers had not yet been

initiated. Both Senegal and Benin are heavily reliant on food imports. The absence of measures to boost local production could limit the scope for HGSF.

Several policies include explicit equity goals. For example, Bangladesh's National School Policy seeks "to reduce wealth disparities in the quality of education." The draft policy in Senegal aims at "providing regular nutritious school meals to schoolchildren, primarily in rural areas and disadvantaged peri-urban centres, with a view to contributing to the achievement of the objectives of education, social protection and health of schoolchildren, as well as strengthening the resilience of the education system."

Guidelines establish well-defined nutritional objectives typically drawing on WFP and WHO protocols. For children aged 3-12 Bangladesh specifies the provision of 30 percent of daily calorific and half of micronutrient requirements, with detailed guidelines on the proportion supplied through proteins, carbohydrates, and fats. Rwanda's education ministry specifies vegetable, grains, and proteins consistent with the provision of a diverse, nutrient-rich diet (Ministry of Education, Republic of Rwanda 2021). While there is a consistency across countries in the broad objectives set for nutrition policy, there are variations. Guatemala and Bolivia attach more weight to childhood obesity than Bangladesh and countries in Africa. Similarly, while Bangladesh, Benin, and Senegal focus on pre-school and primary school-age children, Guatemala, and Bolivia (along with Rwanda) include adolescent and secondary school children.

Public finance – rising ambition in a limited fiscal space

The capacity of governments to finance the expansion of school feeding programmes is conditioned by their overall fiscal space, and the allocation of revenues. Broadly defined, fiscal space refers to the room in a budget to finance specific programmes without jeopardising financial stability. The parameters of sustainable financing are conditioned by average income, domestic revenue mobilisation, debt levels, and budget allocations.

Table 1 summarises some of the indicators relevant to fiscal space in the seven countries covered by the national assessments. There is a wide average income range between Guatemala, a UMIC with an average income of just over $5000, and Rwanda – a LIC, with an average income of $833. The others are all LMICs, albeit with marked variations in average per capita income – from just over $1,000 in Tanzania to $3,415 in Bolivia.

School meals financing is one element in the overall public finance envelope. The size and shape of that envelope is contingent on national revenue mobilisation (supplemented by grants), and the distribution of that revenue across different budget lines. The education

budget is an obvious proxy for school meals financing capacity given that all the countries in the assessment locate the school feeding budget in ministries of education. Four of the countries have transitioned from low to moderate debt distress, reflecting the wider trends summarised in Part 1.

Table 1. Rapid assessment countries: selected indicators

Country	GDP per capita (current $ 2021)	Revenue / GDP (2020)	Risk of debt distress	Public spending education/GDP	Poverty incidence at $1.90 (2011 PPP)	Poverty incidence, national poverty lines (extreme poverty)	Education/ budget spending
Bangladesh	2,503	10	L	1.3	15		12
Benin	1,428	9	M	3.0	42		18
Rwanda	833	16	M	3.3	56		11
Senegal	1,606	20	M	5.5	33		22
Tanzania	1,135	14	M	3.3	49		20
Bolivia	3,415	22	NA	8.9		37 (13)*	
Guatemala	5,025	12	NA	3.8	8	47 (-)*	21

Data sources: IMF and World Bank[xv]

Assessing fiscal space

It is intrinsically difficult to assess the fiscal space for school meals financing. While indicators such as the size of the fiscal deficit and the terms of government financing provide stress indicators, the parameters for sustainable public finance are not fixed. They can be changed by expanding or shifting revenues or improving efficiency. Moreover, school meals programmes cannot be considered in isolation. They typically represent one (relatively modest) line item in government budgets framed to address a range of priorities.

With these limitations in mind, international benchmarks can provide a reference point for assessing actual and prospective fiscal space. The IMF has identified a domestic revenue/GDP ratio of around 20 percent as sustainable for poorer developing countries, rising to 30 percent for middle-income emerging economies. Only Senegal is close to this frontier. The Education 2030 Framework for Action establishes two performance indicators – spending of 4-6 percent of GDP and 15-20 percent of budget allocations. Two countries – Bolivia and Senegal – cross both thresholds.

In summary, measured against plausible benchmarks there would appear to be significant scope for increasing school meals financing as part of an expanded public finance effort:

- With among the world's lowest revenue-to-GDP ratios – Bangladesh, Benin, and Guatemala are currently operating in a highly constrained public finance environment
- Several countries – including Bangladesh, Guatemala, Tanzania, and Rwanda – underinvest in education

Set against this theoretical scope for expanding public finance, the fiscal space available to government is limited – and it has contracted since the onset of the COVID-19 pandemic. The countries covered in the national assessments represent a microcosm of the broader picture described in Part 1. During the COVID-19 pandemic governments increased public spending on safety nets and recovery measures, typically adding 1-2 percent of GDP in public spending. They are now unwinding that spending against the backdrop of slower than projected growth, reduced revenues, and – in some cases – rising debt service pressures.

The fiscal consequences vary across countries. Three of the countries covered in the assessment – Benin, Rwanda, and Senegal – now face potentially stringent adjustment conditions, with governments seeking to reduce fiscal deficits by amounts that exceed new revenue mobilisation.

Table 2. In each case, fiscal adjustments of 3 percent of GDP are planned. Bangladesh is planning a less severe but still marked fiscal deficit reduction, equivalent to around 1 percent of GDP.

Table 2. Debt and fiscal indicators: Benin, Senegal, and Rwanda

	External debt/GDP (2019) %	External debt/GDP (2022) %	Fiscal deficit/GDP (2020) %	Planned fiscal deficit/GDP (2025) %	Domestic revenue/GDP (2020)*
Benin	19.4	25.1	-5.0	-2.5	12.9
Senegal	52.8	57.9	-6.3	-3.0	21.7
Rwanda	44.2	62.0	-8.6	-4.0	18.3

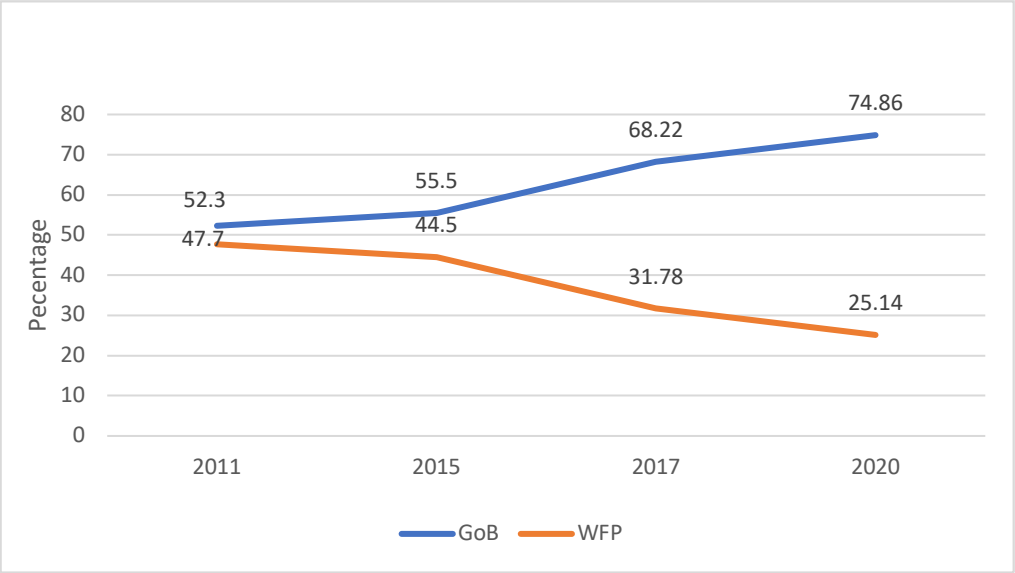
Source: National IMF Article 4 reports and World Bank

The increase in the debt stock-to-GDP ratio from pre-pandemic levels doesn"t capture the weight of debt servicing in national revenues. In 2022, scheduled debt servicing will absorb around one-quarter of government revenue in Senegal. In Benin, it is expected to increase

from 10.3 percent of revenue in 2023 to over 19 percent in 2024-25 due to the Eurobond amortization. Like many other governments facing debt pressures during the COVID-19 pandemic, Benin, Senegal, and Rwanda opted against recourse to the DSSI partly on the grounds that such a move might compromise the country's credit ratings, driving up borrowing costs.

Several governments in our case study countries have expanded pilot initiatives into national programmes, transferring financial responsibility to government budgets. One striking example is Bangladesh (see Figure 5). Benin has taken over financing for around 80 percent of the national programme from WFP.

Figure 5. School meals programme financing in Bangladesh: government and WFP shares (2011-2020)



Source: Rapid national assessment

Sovereign debt financing has played an important role in public finance for some countries. Three of the sub-Saharan African countries covered in the national assessments have used sovereign debt to expand the public finance envelope. In July 2021, Benin became only the second country – and the first country in Africa – to launch an 'sDG bond" with a $500 million issue specifically "tagged" to specified budget lines for spending on anti-poverty programmes, water, nutrition, and other social priorities, including school feeding. Recent debt issues in Senegal and Rwanda have been oriented towards the refinancing of debt, though Rwanda's bond issue included a provision for health-related financing.

Most governments finance school meals programmes out of general revenue, but two countries in our group use earmarked taxes. Guatemala finances its school feeding programme through a formula-based approach allocating 0.8 percent of VAT receipts enshrined in legislation. While there appear to be some inconsistencies in the application of the formula to different levels of education, the arrangement has created a predictable source of funding. Bolivia has used hydrocarbon taxation to convert mineral wealth into investment in human capital through school feeding and other measures. The direct tax on hydrocarbons, is supplemented by a co-participation tax (a basket of several taxes, including VAT) and local taxes (See Table 2). Autonomous municipal governments and Rural Indigenous governments account for 8 percent of programme financing, drawing on local or regional taxes, consequently. Financing provisions are embedded in tax legislation specifying the allocation of tax revenues in some detail.[xvi]

Table 3. Financing mechanisms for Bolivia's school meals programme: cumulative 2011-2019 budget

	Budget (in US$) 2011 - 2019	Percentage
External Donations	**16.354.241**	**1,85%**
Basket Funding	39.909	0,00%
HIPC II Donations	16.123.378	1,83%
Other External Financing Organizations	55.723	0,01%
Other NGOs	13.966	0,00%
WFP	121.264	0,01%
Specific sources	**111.682.682**	**12,64%**
Other specific sources	928.922	0,11%
Specific sources of Autonomous Municipal Governments and Indigenous Governments	74.238.758	8,40%
Royalties	36.515.002	4,13%
Nation's General Treasury (NGT)	**755.310.904**	**85,51%**
NGT Direct Tax on Hydrocarbons	627.777.490	71,07%
NGT Oil Royalties	834.394	0,09%
NGT Special Tax on Hidrocarbons and their derivatives	165.040	0,02%
NGT Tax Co-participation	126.533.981	14,32%
Total	**883.347.827**	**100,00%**

Source: National rapid assessment case study

Bolivia's experience could provide some valuable lessons for Senegal and by extension other countries in Africa likely to secure significant hydrocarbon revenues (Davis and Mihalyi 2021).[xvii] The IMF anticipates that exports of hydrocarbons could add 3 percent to Senegal's GDP by mid-decade, and 0.7 percent of GDP to government revenues. Harnessing part of this expanded revenue base to investment in safety nets, anti-poverty programmes, and school meals interventions could play a transformative role. There is still no legal and fiscal framework in place to steer the incorporation of these hydrocarbon revenues into the national budget. As Senegal's Parliament and government continues to develop the framework ahead of the 2023 budget, there is a major opportunity to link revenue streams to the financing of human development initiatives, including school meals.

Coverage – scaling-up from different starting points

Governments are seeking to scale up or strengthen school meals programmes from very different starting points. From a near standing start, Senegal aims to reach half of primary-school-age children in public schools by mid-decade. Both Bolivia and Guatemala have already achieved universal coverage for all levels of the school system. Despite its low income, Rwanda has one of the developing world's highest rates of coverage. While revenue mobilisation for school feeding across the countries has been centralised, delivery is typically devolved to local authorities and/or schools through a system of grants and arrangements with local communities and school authorities.

Table 4 provides a summary picture of historic, current, and planned coverage drawn from policy documents reviewed in the national assessments. The level of ambition evident in some countries reflects the strength of political commitment and a growing awareness of the benefits of school meal provision (and, by extension, the costs of non-provision). For example, Senegal's plans include extending the programme to an additional 7,000 schools and another 1 million children from 2021 levels. Benin has doubled the reach of its school meals programme in less than 5 years, from 17 percent to 33 percent of the primary-school-age population and has set a policy goal of universal coverage. In Bangladesh, government now manages the school meals programme in 94 out of 104 upazilas (sub-districts), reaching over 3 million children – or 12 percent of pupils in public primary schools.

Table 4. School meals programmes – current and planned coverage, rapid assessment case studies

Country	From (Historic Coverage)	To (Current Coverage and levels of education: 2020/2021)	Share of school population (2020/21 coverage)	Planned coverage
Bangladesh	2014 86 upazilas (sub-districts) Initial pilot: 55,000 children	3.1 million children in 104 upazilas (GoB 94 WFP 10)	12% of primary school children	All public primary (no targets)
Benin	351,000 children (17% primary school age population) 1579 primary schools (2017)	701,000 (2021) 3179 primary schools 51% public primary schools	33 % of primary school children	All public primary (no targets)
Rwanda	NA	3.2 m children pre-school public primary state-supported secondary (2021)	85% of combined population for relevant levels	Universal
Senegal	NA	128,475 (2022) 762 primary schools	5% of primary school age children	1.3m (2026) 7802 schools 48 % of children
Tanzania	NA	NA	NA	NA
Bolivia	Universal in public schools	2.5m 95% of municipalities (2021) Primary Secondary	Universal	Universal
Guatemala	Universal in public schools	2.5m (2021) Kindergarten Primary Secondary	Universal	Universal

Source: Rapid national assessment case studies and national sources

How affordable are the ambitions indicated by governments? Table 4 provides some of the cost indicators relevant to that question, though cross-country comparisons should be treated with caution for at least three reasons. First, food baskets are not necessarily

comparable: Bangladesh provides fortified biscuits while Rwanda provides a diverse mix of fruit and vegetables. Second, country reporting of public finance is often incomplete.

With these caveats in mind, the data is instructive. Per pupil costs are broadly consistent with the estimates provided in other studies. Taking out Rwanda, where public finance plays a more limited role (see below), annual per pupil funding ranges from $43 in Benin to just over $60 in Senegal and Guatemala. The implied expenditure at current levels of coverage ranges from 0.02 percent of GDP in Bangladesh, to 0.1 percent in Benin and Senegal, and 0.3 percent in Bolivia and Guatemala.

Achieving the targets specified in national plans will require an additional financial effort. Back-of-the envelope calculations suggest that Bangladesh could finance universal primary coverage with an investment of less than 0.2 percent of GDP, rising to around 0.3–0.5 percent for Benin and Senegal. Translating these figures into revenue terms underscores the potential affordability of the investments. At current unit cost levels, Bangladesh could triple the coverage of its programme, reaching an additional 6 million children, by mobilising an additional 0.6 percent of GDP in revenue. Investing an additional 0.2 percent of GDP would enable Benin to more than double the coverage of its programme.

Expanding revenue is a more promising pathway to affordability than switching revenue. This can be illustrated by reference to education budgets. Currently, public financing for school meals programmes accounts for 2-5 percent of education spending in most countries. Meeting the cost of universal school meal coverage within the current envelope would require an increase in that share commensurate with the target – a seven-fold increase in Bangladesh and doubling or tripling for Senegal and Benin. Given the limited flexibility in education budgets dominated by teacher salaries, this would imply politically challenging and educationally demanding transfers from other areas.

Table 5. School meals financing - per pupil and estimated shares of GDP, education budgets, and government revenues

Country	Public spending per pupil annual $ (Daily US cents)	School meals financing /GDP	School meals financing/ education budget	School meals financing/ government revenue
Bangladesh (242 days)	11 (28)	0.02	2.4	0.20
Benin (200 days)	43 (21)	0.17	5	1.8
Rwanda (190 days)	15 (28)	0.3	9	2.2
Senegal *(200 days)	61 (30)	0.10	1.8	0.45
Tanzania	NA	NA	NA	NA
Bolivia (180 days)	48 (27)	0.3	3.0	1.3
Guatemala (180 days)	62 (180)	0.3	2.5	7

Sources: Rapid national assessment case studies; IMF Article 4 reports; World Bank

Translating ambitious strategy ambitions into outcomes requires financial planning, with targets underpinned by budget allocations, and – critically – budget execution. Predictable finance is one of the pillars of effective delivery. The national assessments identified several concerns in this area. In the case of Senegal, the targets set out in the national school meals strategy are not currently linked to identified revenue streams. Currently, over 80 percent of programme financing is provided by donors. There is no guarantee that donor support will continue at current levels, let alone increase to meet the financing requirements for the targets set for mid-decade.

Wider financial planning problems were identified in the assessment studies. It is not clear from the data available in several countries that current national budget provisions are consistent with credible costings for food baskets. Several national plans also lack data on the marginal costs of reaching poorer, more remote areas with highly dispersed populations. Data on the capital costs of strengthening school infrastructure was also sketchy. Only Rwanda appears to have done this exercise in any detail. With the exception of Bolivia and Guatemala, the case studies point to the case for developing more fully costed national plans specifying annual reach targets consistent with strategy goals and underpinned by budget commitments

Guatemala and Bolivia stand out as models of institutional best practice in budget governance. Both countries have well-defined budget lines for school feeding and legislative provisions specifying the responsibilities of different actors, from local to national government. Arrangements in Bolivia are formalised through 2010/2011 laws on education and devolved financing, and a 2014 'school feeding law."

Other countries are moving in a positive direction. Benin is in the process of enacting legislation on the financing of school canteens under a Government Action Programme (2021-2026) as part of the National Integrated School Feeding Program, which evolved out of a WFP-led pilot initiative but has now been integrated into the national budget. Bangladesh and Rwanda have established school meals budget lines under their respective education ministries. In Rwanda the 2020 School Feeding Policy identifies the Ministry of Education as the line ministry responsible for implementation and coordination, with the Ministry of Finance and Economic Planning having responsibility for mobilising domestic and international resources.

Efficiency gains provide another pathway to expanded coverage. Cross-country data analysed by the GCN shows that the administrative costs of delivering food to schools is inversely related to income, averaging one-third in the poorest developing countries and 12 percent in UMICs. Higher-performing LMICs typically report administrative costs of 15-25 percent.

The national assessment studies reported a range of costs associated with school meals delivery – and there may be scope for efficiency gains. Benin and Senegal report cost structures that would appear to be at the lower end of the LMIC efficiency distribution. Non-food administrative costs account for 32 percent of Senegal's draft budget, falling to 26 percent of Benin's budget (though a 2019 evaluation reported non-food administrative costs at twice this share). Bangladesh has exceptionally low administrative costs, with just 2 percent reported in the national assessment – a figure that reflects the lower procurement, storage, and delivery costs associated with fortified biscuits. In the highly devolved systems of Bolivia and Guatemala, administrative costs are absorbed by local communities and school committees and are not reported in budget accounts.

"Leaving no one behind" – equity and targeting

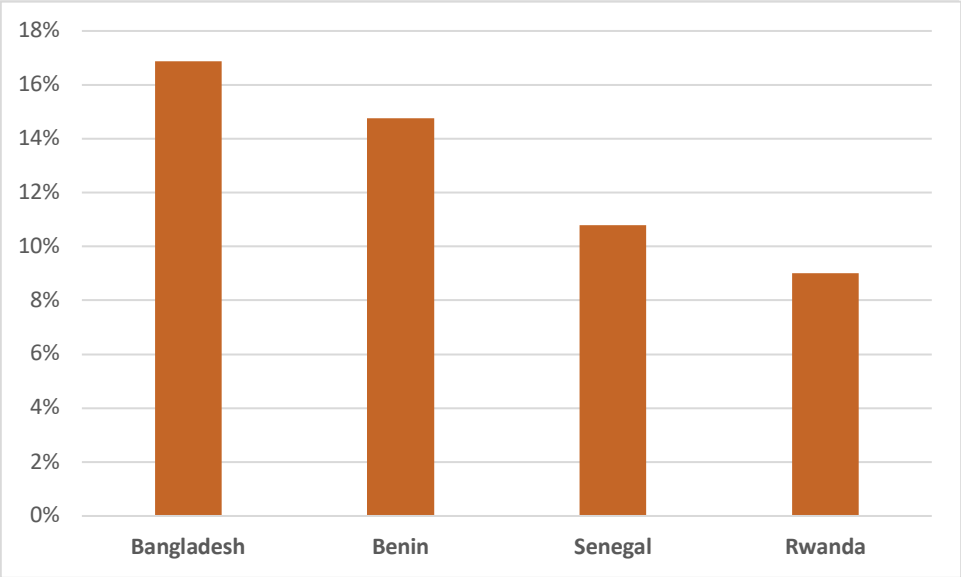
Governments in the countries examined in the national assessments are grappling with many of the equity challenges discussed in Part 1. Operating with limited fiscal resources in countries with high levels of poverty, nutritional deprivation, and education disparities,

planning authorities are faced with stark choices and potential trade-offs between reach and per pupil financing.

What emerges clearly from the national assessments is the critical role played by school meals financing in the budgets of poor households. Using poverty-gap data from the World Bank's Povcal site, we derived the average income of people living below the $1.90 (2011 PPP) threshold for Bangladesh, Benin, Senegal, and Rwanda. Apart from Bangladesh, these are all countries with more than one-third of the population living below the poverty threshold. We then treated the value of food provided through school meals programmes as an implicit transfer to the household, adjusting for the length of the school year. The transfer value ranged from 9 percent (Rwanda) to 17 percent (Bangladesh) of household income (Figure 6).

These transfers provide far-reaching benefits. In the not atypical case of families with two to four school-age children, they represent either a source of enhanced nutrition (over and above what might otherwise have been spent) or a saving, releasing resources for spending in other areas. To the extent that school-based food transfers are predictable, they also offer a potential insurance and resilience in the face of external shocks, such as food price inflation, crop losses, or health episodes.

Figure 6. Value of food transfer as share of average income of extreme poor: Bangladesh, Benin, Senegal, and Rwanda

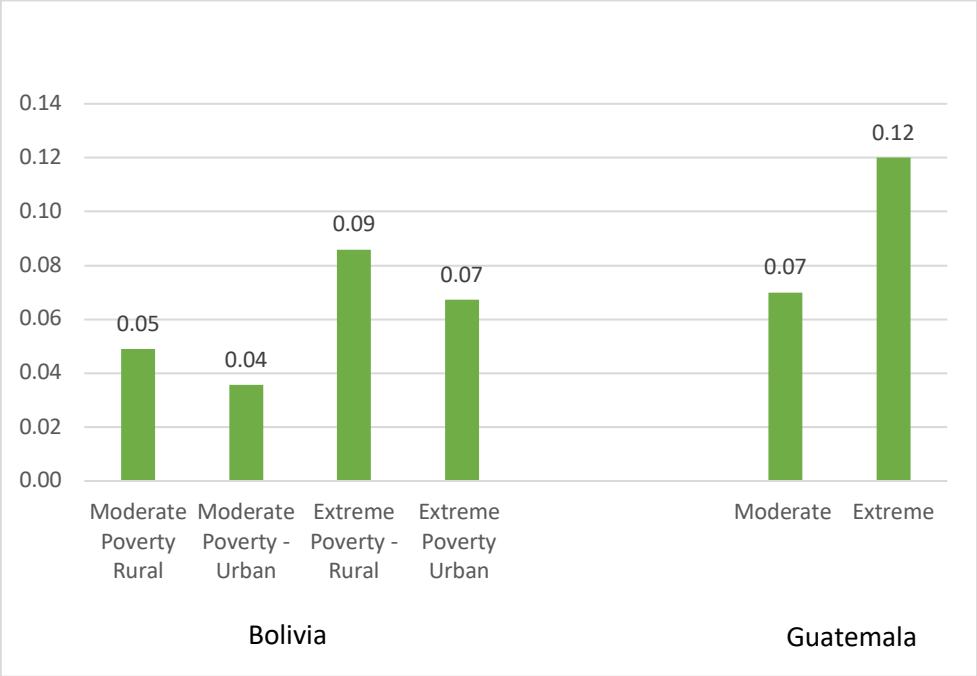


Source: Estimates derived from World Bank Povcal data and national data on school meal transfers

Even at the higher national poverty thresholds used in Bolivia and Guatemala, school meals represent an important transfer. In Bolivia, the implicit transfer represents 10 percent of the

moderate poverty line for rural areas, rising to 18 percent of the threshold for extreme poverty. For Guatemala, it represents 7 percent of the national poverty threshold below which almost half of the country – over 8 million people – lives (Figure 7).

Figure 7. Value of food transfer: percentage of moderate and extreme national poverty thresholds in Bolivia and Guatemala



Source: Background papers on Bolivia and Guatemala

Different levels of coverage for school meals programmes provide governments with different equity challenges – and opportunities – in policy design. Those challenges cannot be viewed in isolation. The strengths and weaknesses of school feeding programmes are determined partly by the wider system of social protection, health, education, and anti-poverty programmes into which they are integrated. Governments in the countries covered by the national assessments starting from a low base have adopted a range of approaches to targeting:

- **Bangladesh**. The title of their school meals programme – School Feeding Programme in Poverty-Prone Areas – is self-explanatory in terms of its approach to targeting. It operates in 104 out of 495 national *upazilas* (sub-districts) selected through poverty-mapping indicators (WFP 2012). Three types of schools are covered: government primary, independent *Ebtedayee* (primary) madrasa, and Children's Welfare Trust. While the programme has met its targets for reach, there

are important policy questions to be addressed. For example, although most of the poor and nutritionally-vulnerable children attend these types of school, many do not. The poverty maps used to select *upazilas* are derived from monetary poverty estimates rather than nutritional indicators, which may downplay the importance of malnutrition and micronutrient deficiency, especially among girls.

- **Benin**. Programme delivery has been associated with the emergence of two distinctive targeting systems, one operating under the national PNSAI programme and one deployed by GPE. The outcomes illustrate the tensions – and inconsistencies – that can emerge with the weighting attached to different criteria (see Table Annex 2). For example, Mono, a department with low PNASI coverage, has a higher level of food insecurity that Donga, which has high coverage. PNASI coverage rates tend to be higher in departments with elevated levels of moderate malnutrition (such as Plateau and Atacora), though this is not a consistent pattern (coverage is lower than might be anticipated in Couffo and Zou, for example). The weighting attached to the various indicators of deprivation (for example, school enrolment and dropout versus malnutrition) is unclear, illustrating potential tensions between different objectives.

- **Senegal.** The government has used poverty mapping to identify areas marked by high levels of food insecurity in rural and peri-urban areas (see map Annex 2). An initial composite indicator derived from food insecurity, nutrition, and education performance indicators was supplemented in 2020 by COVID-related indicators. This broad-based geographic targeting has the merit of simplicity – but it comes with the risk of bypassing large numbers of poorer children in non-prioritised areas. The weakness of Senegal's main safety net – the *Programme de bourses de securité familiale* – which accounts for less than 0.2 percent of GDP, leaves many of the country's most vulnerable children without support (IMF 2022e).

Universal provision of school meals does not resolve the equity issues highlighted in Part 1. This is evident in Guatemala – a country marked by high levels of poverty, inequality, and child malnutrition: stunting rates are rising to over 70 percent in some departments (USAID 2021). The country's main social safety net – *Bono Familia* – has done little to reduce child poverty or malnutrition. That's largely because it is chronically under-financed: Guatemala allocates less than 0.1 percent of GDP to social spending, according to the IMF (2022b). *Bono Familia* reaches only 5 percent of the country (UNICEF 2021a). By contrast, the School Feeding Programme reaches every municipality in the country. That programme

currently provides the same financial transfer – $0.60 cents a day – for every child, irrespective of their household wealth or the level of poverty and malnutrition in the municipality where they live. The transfers are broadly progressive because they target only public schools. But they could be weighted to provide higher transfers in the poorest municipalities.

Experience in Rwanda raises a different set of equity issues. The government has developed a school feeding infrastructure which is close to universal coverage for public schools, including state-supported secondary schools. However, public financing represents just one-third of the cost of delivery. Household contributions in cash or in-kind (through commodities and/or labour) cover the balance, with some limited exemption provisions for very poor households (Ministry of Education Republic of Rwanda 2021). Local School Feeding Committees oversee the contribution system.

There is an obvious danger that poorer households will experience difficulties in contributing to the programme, creating the potential for children to be excluded or stigmatised. That danger has been amply documented in the literature on user fees in health, which provides a cautionary note (Yates 2009). In the context of school feeding finance, policymakers face an obvious dilemma. Exempting poor families from contributions can protect equity but risks leaving schools with insufficient funds. Alternatively, limiting exemptions can increase the resource envelope for school meals but exclude many children from food insecure households. The seasonality of hunger adds to the targeting complexities facing governments. Evidence from the Benin national assessment was instructive. In this case project-based implementation has resulted in a range of inconsistent approaches, with charging policy emerging as a source of friction between schools and parents.

Strengthened integration between the school meals programmes and the wider social protection systems could help address the equity challenges posed by community contributions. Rwanda's has been expanding the social protection system, which now accounts for around 1.5 percent of GDP (UNICEF Rwanda 2020). That system includes cash transfers provided to extreme poor and highly vulnerable households under the *Vision 2020 Umurenge* programme using a mix of geographic and poverty targeting (Habimana, Haughton, Nkurunziza, and Haughton 2021). Providing households with school-age children with exemptions for school meals and/or increased cash support could at least partially mitigate the equity risks associated with the current policy.

The (limited) role of donors

Consistent with the broader picture summarised in Part 1, it is difficult to establish with any clarity the overall levels of donor financing for school meals programmes in the countries covered by the assessment. In some cases, bilateral donors have played an important role in creating the foundations for what have emerged as national programmes. In others, the aid effort appears fragmented, disjointed, and under-funded. The case studies identify areas of good practice that may help inform more effective donor practices.

The donor reporting data summarised in Part 1 illustrate the lack of strategic collective purpose on the part of the donor community. Tanzania, which has no national plan for school meals financing, received as much aid as Benin and Senegal – two countries that have adopted ambitious national plans – combined. Guatemala, a UMIC with the capacity to finance national programmes from domestic resources, was the single biggest aid recipient for school feeding. Given the financial constraints operating on LICs lacking the fiscal space to expand the reach of school meals programmes, this points to a misalignment between donor support and need.

At its best, international aid has supported the development of effective national programmes. In Bangladesh, the combination of deep engagement with a small number of donors, strong technical capabilities in the Ministry of Primary and Mass Education, and political support, created conditions conducive to a rapid scale-up. In Benin, the government secured support for an expansion of the PNASI programmes at a roundtable where donors endorsed, and pledged support for, a decision to increase coverage from one-third to one-half of the eligible primary school population.

The Benin case illustrates the importance of a strong strategic framework through which to coordinate donor support. The national budget line for school meals was increased in 2020, with a broad group of bilateral and multilateral donors – including China, Japan, the Islamic Development Bank, the Africa Development Bank, and World Bank – pledging $21 million in support, or around one-quarter of total financing. Half of the donor commitment was provided in the form of prospective in-kind contributions. The PNASI provided an umbrella for a larger group of donors and philanthropic foundations to support projects integrated into the national strategy. The small number of major donors involved in the programmes and key role of WFP as the implementation partner for PNASI has minimised coordination problems. Government respondents also emphasised the importance of informal coordination channels with WFP and Catholic Relief Services, a major NGO implementer.

The Rwandan case study highlights the importance of effective coordination in reducing transaction costs. The National Steering Committee at the apex is chaired by the Minister for Education and includes 16 ministries and six development partners. It sets policy and oversees the work of a School Feeding Technical Working Group. Co-chaired by the WFP and the education ministry, this includes a broader group of development partners and reports on planning and implementation of the national strategy. Clear guidelines for policy implementation, well-defined strategic goals, and government leadership of donor coordination appear to have reduced the transaction costs often associated with multiple donors.

Aid effectiveness in Senegal appears to suffer from a proliferation of donors, high levels of intermediation, and coordination structures that are still under development. Over the past decade, aid has financed a growing share of a shrinking programme, with – until recently - relatively weak government oversight. The four main actors – WFP, Counterpart, the GRDR and CRS – account for over 80 percent of programme delivery through a patchwork quilt of initiatives. The French Development Agency (AFD) funds the GRDR in 57 schools across 10 departments marked by high levels of vulnerability, engaging with agricultural cooperatives and food companies. It also funds a programme implemented by Catholic Relief Services reaching 22,000 children across 50 municipalities as part of a wider project (*Baye Daare*). Canada and Sweden are intermittent donors. A GPE project will provide $0.9m to school canteens, targeting nearly 107,000 pupils enrolled in 637 elementary schools over four months of the 2020-21 school year. The GPE project is implemented by NGOs and WFP, which will use its own budget to finance the school year after the end of this programme.

This structure is not conducive to effective delivery. Projects are marked by uncertain funding, divergent schedules, and different reporting systems. There is no guaranteed aid pipeline to continue or expand current projects – and at the time of writing there is no national financing line to underpin the strategy. The creation of a Multisectoral Group on School Food and Nutrition and the impetus provided by President Macky Sall's personal engagement may help address some of the most immediate coordination concerns, but the absence of a coherent donor support system aligned to the national strategy is cause for concern.

Part 5 - Reflections on future SFI priorities

This section offers some brief reflections on the priorities for the Sustainable Financing Initiative (SFI) of the School Meals Coalition as the Education Commission and WFP consider the next phase of its work. It is important to recognise that the SFI is one cog in a wider set of School Meals Coalition initiatives defined by the shared purpose of responding to the bottlenecks of extending the reach and enhancing the quality of school meals programmes. For example, the Research Consortium of the School Meals Coalition is building an evidence base on impact, evidence, and metrics, including value for money. The Data and Monitoring Initiative is developing indicators and reporting systems to inform policy design and implementation, providing national governments and donors with a critical resource. The SFI's objective is to help overcome the financing challenge. An obvious focal point for the SFI is the proposed $5.8 billion plan of action adopted by the Coalition to reach an additional 73 million children.

At risk of stating the obvious, it is worth emphasising that context matters – and there are two aspects to the current financing context for school meals that merit consideration. First, food price inflation has far-reaching consequences, some of which we have considered in this report. The food crisis threatens to dramatically increase child poverty and malnutrition among school-age children, with attendant threats to school participation, learning, and inequalities in education. School meals programmes may represent an effective if partial antidote, but food price inflation will inevitably raise the per capita cost of school meals provision (even allowing for efficiency gains). Unfortunately, school meals provision has remained at best a minor theme in the policy agenda developed in response to the food crisis, as witnessed by the outcome of the Transforming Education Summit, and its absence from the food security response agenda developed by the G20, the World Bank, the IMF, and aid donors. While the future direction of food prices remains uncertain, there may be an opportunity to link the case for school meals more closely to the food crisis response agenda, potentially opening new funding channels.

The second feature of the current context is the rapidly shrinking fiscal space available to governments in LICs and LMICS. Having increased spending during the pandemic (albeit at levels and rates dwarfed by those in rich countries), poorer developing countries are now adjusting to reduced revenue projections, increased debt servicing, and less benign growth prospects. Budget pressures are mounting in the face of acute financing gaps for social

provision and infrastructure investment. The case for school meals financing has to be made – and won – in the face of extreme fiscal stress and competing demands.

This report has set out some of the financing options that may be available. Ultimately, those options are determined by national fiscal circumstances, growth prospects, revenue efforts, and public spending. From an SFI planning perspective, this places a premium on engagement with national governments and, by extension, the development of credible national plans for school feeding programmes. Some countries have embedded current school meals programmes in budget allocations, though these allocations may prove insufficient to maintain, let alone expand, as food prices rise. In many cases, however, there appears to be a striking gap between the broad levels of ambition defined in school meal strategies on the one side, and the provisions made in medium-term financial plans and budget allocation.

The SFI could play an important role in filling this gap. The starting point is the development of 3- to 5-year national plans specifying clear targets and the associated costs of delivery. As argued in this report, "progressive universalism" should be an organising theme of such plans, reflecting a commitment to equity and the most vulnerable learners. This may be an area in which the SFI could collaborate closely with WFP teams in country, perhaps working with a multilateral agency such as the Global Partnership for Education to support the development of national planning. Engagement with the Commitment to Equity Institute could help to provide valuable tools for analysis on prospective benefit incidence. In order to make the public policy links to the food crisis and the deteriorating child poverty environment in many countries, there is a compelling case for integrating financial planning for school meals programmes into wider social protection strategies. Recognising the resource constraints under which the SFI currently operates, we would recommend intensive engagement with a small number of countries with demonstrated, or potential, high-level political engagement.

Deeper national engagement would offer a window on the real financing options facing governments. As we have highlighted in this report, prospects for school meals programme financing are conditioned by familiar public finance factors, including average income, revenue-to-GDP ratios, growth prospects, and public debt. Beyond making the case for more effective revenue raising and more equitable public spending, there are several financing avenues that merit further research. These include:

- **Natural resource revenues:** There is a compelling case for converting current natural capital into investments in human capital, not least to escape the "resource

curse" associated with the former. Bolivia provides a compelling example of what may be possible. Several LICs and LMICs – Senegal, Tanzania, Mozambique, Nigeria, and Kenya among them – could potentially finance universal or greatly expanded school meals programmes by earmarking relatively small shares of future oil and gas revenues to school meals programmes.

- **Other earmarked revenues:** Public finance commentators are often wary of earmarking revenues, and not without some justification. Earmarking reduces flexibility and can lock in spending patterns as vested interest groups defend allocations. As a broad principle, funding from (progressively mobilised) general revenue is a best option. However, Guatemala demonstrates the scope for financing universal school meals provision through an earmarked tax, specifically VAT revenue. There is also a compelling case for financing school meals by taxing "public bads" they are designed to address, including through taxation on sugar-intensive products associated with obesity and wider public health concerns.
- **SDG bonds:** The scope of debt financing has become more limited with increased interest rates, a growing spread on bond issues from developing countries, and diminished growth prospects. However, building on the experience of Benin, Indonesia, and Mexico, the SFI could play a role in supporting the development of bond conditions that include provisions for school meals financing.
- **Debt relief:** This report has summarised some of the issues associated with unsustainable debt – and the absence of a comprehensive debt relief framework remains a barrier to effective action. Even so, there may be scope for positioning school meals on the debt reduction agenda. The least effective way of doing so would be to engage with individual creditors on debt conversion, which typically comes with high transaction costs and limited benefits. An alternative would be to work with governments seeking to finance broader programmes through debt relief.

Beyond deeper national engagement, the SFI should prioritise advocacy to mobilise new and additional international development finance. In the absence of progress in this area, it is difficult to see a financing route to the School Meal Coalition's ambition of mobilising $5.8 billion. Recognising that international resource mobilisation is a very crowded playing field, there are areas in which enhanced SFI efforts could yield potentially valuable results, including:

Development assistance: There is an urgent need for OECD DAC donors to (i) simplify and improve the accuracy of reporting systems on school meals financing; and (ii) increase financing from current levels. While the first exercise is largely technical, the second is overwhelmingly political. Building on the analysis carried out for this report, we would recommend intensive engagement with the DAC secretariat to build a credible reporting system. The case for increased aid to school meals is a strong one, but it is unlikely to be won without higher-level and deeper engagement from a small number of donors who will play a leadership role – and this should be the priority for the SFI.

Multilateral finance: Here, too, there is an obvious need to focus SFI efforts in areas of greatest potential return. The expanded IDA programme is one obvious focal point, though the MDBs in general could be doing far more. Another may be the various initiatives now emerging to address the food security crisis in developing countries.

One final reflection relates to **the narrative on school feeding.** The case made by the School Meals Coalition is underpinned by a powerful body of evidence, some of which is summarised in this report. That evidence includes cost-benefit analysis placing school meals in the "best-buy" category of social investment. The economic arguments in favour of investment are compelling and well-argued. However, systemic change in public policy seldom starts with costings and technical efficiency arguments. The case for school meals is ultimately about the kind of world we want to live in, the ethics of combating child hunger, a belief in the transformative power of education, and a sense of international solidarity in a deeply interconnected world. National coalitions and international partnerships tapping into the values underpinning the case for school meals have a potential to cut through polarised political debates. All of this suggests that the case for school meals financing would be greatly strengthened by investments in the campaigning and advocacy that makes change possible.

Annex 1. Donor financing by country: selected donors (incomplete)

Canada

Recipient Name	USD_Disbursement
Haiti	8.95
Africa, regional	7.54
Mozambique	1.95
Mali	1.58
Senegal	0.05
Congo	0.00
Ethiopia	0.00
Total	**20.07**

Japan

Recipient Name	USD Disbursement
Nepal	3.39
Somalia	3.33
Haiti	2.08
Democratic Republic of the Congo	1.00
Guinea	0.80
Bangladesh	0.60
Jordan	0.49
Burkina Faso	0.40
Rwanda	0.35
Kenya	0.24
Mauritania	0.09
South Africa	0.07
Cote d”Ivoire	0.04
Total	**12.88**

Italy

Recipient Name	USD_Disbursement
Lebanon	1.14
Tunisia	0.49
Mozambique	0.22
Nepal	0.08
Kenya	0.06

India	0.03
Madagascar	0.02
Zimbabwe	0.01
Cote d”Ivoire	0.01
Thailand	0.01
Philippines	0.01
Dominican Republic	0.00
Cambodia	0.00
Total	**2.08**

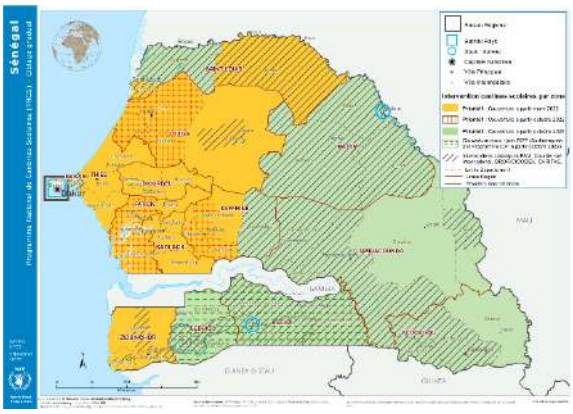
France

Recipient Name	USD_Disbursement
Haiti	2.05
Venezuela	1.25
Niger	1.14
Chat	0.56
Algeria	0.46
Bilateral, unspecified	0.28
Djibouti	0.22
Burkina Faso	0.04
Madagascar	0.03
Suriname	0.03
Viet Nam	0.02
Benin	0.01
Mauritania	0.00
Cote d”Ivoire	0.00
Morocco	0.00
Togo	0.00
Senegal	0.00
Peru	0.00
Mali	0.00
Africa, regional	0.00
Total	**7.16**

Norway

Recipient Name	USD_Disbursement
Malawi	8.84
Mali	3.41
Ethiopia	1.39
Zimbabwe	0.07
Total	**13.71**

Annex 2. Targeting indicators – Senegal and Benin



PNASI Coverage rates	Department	Coverage PNASI schools/ total public primary	Coverage PNASI pupils/ Total in public primary	Access rate (GPE category)	Performance rate (GPE category)	Moderate food insecurity rate (% severe food insecurity)
Low	LITTORAL	6,50%	6,70%	97%	73%	1,5% (0)
	MONO	24,60%	18,30%	97%	73%	6,2% (0,4%)
Intermediate	ATLANTIQUE	32,60%	21,50%	de 80 à 90%	de 56 à 65%	7,2% (0,2%)
	BORGOU	34,10%	24,70%	68%	56%	7,7% (0,2%)
	OUEME	34,20%	28,10%	97%	73%	7,4% (0,7%)
	COUFFO	35,60%	28,30%	80- 90%	56 - 65%	14,9% (1,3%)
	ZOU	38,00%	30,20%	80- 90%	56 - 65%	,11,1% 6%)
	COLLINES	44,30%	31,60%	80- 90%	56 - 65%	12,9% (2,4%)
High	ALIBORI	48,90%	35,50%	35%	24%	7,6% (0,4%)
	DONGA	50,70%	43,30%	80- 90%	56 - 65%	4,9% (0,4%)
	PLATEAU	60,20%	46,30%	80- 90%	56 - 65%	8,5% (0,6%)
	ATACORA	66,40%	54,10%	68%	47%	20,9% (2,7%)
National		41.3%	31%			

Endnotes

[i] https://schoolmealscoalition.org/take-action/

[ii] On the assumptions, analysis, and methods used to expand and update the projections of the impact of COVID-19 on child poverty and children living in monetary poor households carried out last year by Save the Children and UNICEF, please see Impact of COVID-19 on children living in poverty: A Technical Note

[iii] There is also evidence that food price inflation contributes to stunting in-utero: Woldemichael, Kidane, and Shimeles. "Food Inflation and Child Health." The World Bank Economic Review 36, no. 3 (10 August 2022): 757–73. https://doi.org/10.1093/wber/lhac009.

[iv] World Food Programme. "A Generation at Risk: Nearly Half of Global Food Crisis Hungry Are Children, Say WFP, African Union Development Agency NEPAD, The Education Commission and Education Partners | World Food Programme." Accessed 7 October 2022. https://www.wfp.org/news/generation-risk-nearly-half-global-food-crisis-hungry-are-children-say-wfp-african-union.

[v] The evidence in this section draws on the following systematic reviews and descriptive studies: UNESCO. "Making Evaluation Work for the Achievement of SDG 4 Target 5: Equality and Inclusion in Education", 2019; Bashir, Sajitha, Marlaine Lockheed, Elizabeth Ninan, and Jee-Peng Tan. Facing Forward: Schooling for Learning in Africa. Washington, DC: World Bank, 2018; Dapo-Famodu, Adetoun. 'school Feeding Programmes in Low- and Lower-Middle-Income Countries: A Focused Review of Recent Evidence." World Food Programme, 2021; Bedasso, Biniam. "Feeding Kids May Look Expensive by Standard Value-for-Money Metrics, but It Promotes Equity in out- Comes beyond Just Test Scores." In Schooling for All Feasible Strategies to Achieve Universal Education, edited by Justin Sandefur. Center for Global Development, 2022; Drake, Lesley, Meena Fernandes, Elisabetta Aurino, Josephine Kiamba, Boitshepo Giyose, Carmen Burbano, Harold Alderman, Lu Mai, Arlene Mitchell, and Aulo Gelli. 'school Feeding Programs in Middle Childhood and Adolescence." In Child and Adolescent Health and Development, edited by Donald A. P. Bundy, Nilanthi de Silva, Susan Horton, Dean T. Jamison, and George C. Patton, 3rd ed. Washington (DC): The International Bank for Reconstruction and Development / The World Bank, 2017; Adelman, Sarah, and Daniel Gilligan. "How Effective Are Food for Education Programs?: A Critical Assessment of the Evidence from Developing Countries." 0 ed. Washington, DC: International Food Policy Research Institute, 2008.

For example, in Kenya, a randomized trial showed that the negative effect of a drought on school attendance was greater in schools that did not have school feeding programs than those that did (Omwami, Neumann, and Bwibo 2011).

[vi] On Mali see Aurino, Elisabetta, Jean-Pierre Tranchant, Amadou Sekou Diallo, and Aulo Gelli. 'school Feeding or General Food Distribution? Quasi-Experimental Evidence on the Educational Impacts of Emergency Food Assistance during Conflict in Mali." The Journal of Development Studies 55, no. sup1 (13 December 2019): 7–28. https://doi.org/10.1080/00220388.2019.1687874.

[vii] For an excellent overview of some of the public policy issues see: Devereux, Stephen, Rachel Sabates-Wheeler, and Alvaro Pascual. 2010P. "Home-Grown School Feeding & Social Protection."

[viii] On Latin American children see: Duran, Ana Clara, Melissa Mialon, Eric Crosbie, Melissa Lorena Jensen, Jennifer L. Harris, Carolina Batis, Camila Corvalán, and Lindsey Smith Taillie. "Food

with Healthier Dietary Intakes: The Healthy Communities Study." Journal of the Academy of Nutrition and Dietetics 118, no. 8 (August 2018): 1474-1481.e1. https://doi.org/10.1016/j.jand.2018.01.010; on the potential role of schools in Asia: Thow, Anne Marie, Penny Farrell, Matthias Helble, and Cut Novianti Rachmi. "Eating in Developing Asia: Trends, Consequences and Policies", 2020, 55; on Africa: Wineman, Ayala, Moses C. Ekwueme, Liliane Bigayimpunzi, Alice Martin-Daihirou, Eth Ludmilla de Gois V. N. Rodrigues, Priscilia Etuge, Yale Warner, Heidi Kessler, and Arlene Mitchell. 'school Meal Programs in Africa: Regional Results From the 2019 Global Survey of School Meal Programs." Frontiers in Public Health 10 (2022).

[ix] Calculated from World Bank and UNESCO. "Education Finance Watch 2021", 2021.

[x] In the regional case of Africa coverage rates average 15 percent across the 13 countries with no line budget, compared to 25 percent for countries with a line budget.

[xi] For IDA-eligible countries the reported tax-to-GDP ratio is 15.5 percent (International Development Association. "Report from the Executive Directors of the International Development Association to the Board of Governors. Building Back Better from the Crisis: Toward a Green, Resilient and Inclusive Future", 2022).

[xii] For example: Galloway, Rae, Elizabeth Kristjansson, Aulo Gelli, Ute Meir, Francisco Espejo, and Donald Bundy. "School Feeding: Outcomes and Costs." Food and Nutrition Bulletin 30, no. 2 (2009): 171.

[xiii] In order of amount, these donors are United States ($588m), Canada ($20m), Norway ($14m), Japan ($13m), France ($7m), Korea ($4m), EU ($3m), FAO ($2m), Italy ($2m). The degree of donor cooperation is captured in Figure 3

[xiv] Specifically, the Peasant, Indigenous and Native Economic Organizations and the Community Economic Organizations.

[xv] The data sources are drawn from relevant IMF Article 4 reports for Bangladesh, Benin, Rwanda, Senegal, Tanzania, and Guatemala and fiscal data (IMF. "List of LIC DSAs for PRGT-Eligible Countries As of August 29, 2022", 2022.https://www.imf.org/external/Pubs/ft/dsa/DSAlist.pdf). National income and poverty data is drawn from World Bank sources respectively from: GDP per Capita (Current US$)." Accessed 8 October 2022. https://data.worldbank.org/indicator/NY.GDP.PCAP.CD; and "Government Expenditure on Education, Total (% of Government Expenditure)." Accessed 8 October 2022. https://data.worldbank.org/indicator/SE.XPD.TOTL.GB.ZS. Data on Bolivia's revenue was drawn from: "Revenue Statistics in Latin America and the Caribbean 2022 – Bolivia." Accessed 8 October 2022. https://www.oecd.org/tax/tax-policy/revenue-statistics-latin-america-and-caribbean-bolivia.pdf

[xvi] According to the current legal framework, the Direct Tax on Hydrocarbons (IDH) is divided into 64.8% to regions (departments and municipalities) and 35.2% to the Nation´s General Treasury (TGN). From the resources that go to regions, the regional governments receive 32.8% of the IDH, 25.6% of the IDH goes to the local governments and the remaining 6.4% to public universities.

[xvii] Annual revenues for Tanzania could reach USD 2.9 billion annually112, or USD 24 per capita.

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