GLOBAL RESILIENCE REPORT

Safeguarding the nutrition of vulnerable children, women, families and communities in the context of polycrisis

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WFP World Food Programme

Standing Together for Nutrition

Micronutrient FORUM

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The report was developed through a partnership between UNICEF, the World Food Programme (WFP), and the Standing Together for Nutrition Consortium (ST4N) – a multidisciplinary consortium of experts in nutrition, food and health systems, gender, and economics examining the scale and reach of global health, economics, conflict, and climate crises and their adverse impact on the nutrition for millions of vulnerable women and children. ST4N is hosted by the Micronutrient Forum (MNF).

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FOREWORD

For some, the memory of the COVID-19 pandemic has already faded, while others continue to struggle in the aftermath of the crisis. Today, the combined impact of increasing inequities, conflict, severe climate events, economic disruptions, and the lingering effects of the pandemic have culminated in an ongoing polycrisis that is undermining the nutrition and well-being of the most vulnerable and marginalized populations in low- and middle-income countries.

The polycrisis has touched the lives of individuals and households and disrupted communities and systems in multiple ways. Nutritious foods became more expensive, health centres providing nutrition and health services were closed, schools providing education and nutrition services shut down, jobs were lost, and food insecurity, poverty and malnutrition levels rose.

The Standing Together for Nutrition Consortium, with its key partners UNICEF and WFP, analysed the impact of the polycrisis on the systems that ensure access to nutritious foods, deliver essential services necessary for good nutrition, and protect positive food, feeding and care practices. Not surprisingly, we found that the polycrisis hit women and children the hardest.

At the same time, we also discovered stories of success and hope. Despite the immense challenges, many countries and their systems demonstrated ample capacity to respond to the polycrisis, and in doing so, were able to mitigate its impact on vulnerable populations. The analyses and country experiences presented in this report illustrate important lessons regarding the resilience of systems to safeguard nutrition in times of crisis.

We call upon governments, development partners and donors to learn from these three years of polycrisis to build and strengthen the adaptive, absorptive and transformative resilience capacities of key systems, to protect the nutrition and well-being of the most vulnerable and marginalized populations in the multiple crises yet to come.

Signed,

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EXECUTIVE SUMMARY

Millions of vulnerable people over the past few years have suffered from the harsh impacts of a devastating polycrisis—largely caused by the effects of the COVID-19 pandemic, climatic and economic crises, and new and protracted conflicts that have deepened food and nutrition insecurity. Beyond the direct health and economic impacts on individuals, these crises disrupted the key systems—food, health, education, water and sanitation, and social protection—that support access to nutritious foods, essential nutrition services, and positive feeding and care practices for children and women.

This report describes the impact of the polycrisis on these outcomes and highlights the experiences of different countries, offering valuable lessons on the resilience of systems to safeguard nutrition. Lastly, the report builds upon these findings and lessons learned to propose policy and programmatic recommendations for strengthening the nutrition resilience of systems, before, during, and after a crisis.

Evidence was extracted and synthesised from peer-reviewed publications and reports by global organizations, including United Nations' agencies, using the UNICEF Conceptual Framework on Maternal and Child Nutrition. For the country examples, a 'nutrition resilience framework' was developed to analyse how key systems responded during the polycrisis and derive lessons learned.

Key findings indicate that, despite data limitations, acute malnutrition rose significantly among women and children in the countries most affected by the food and nutrition crises. However, many countries demonstrated their ability to adapt, absorb, and transform their systems in response to the polycrisis, and in doing so, were able to blunt its effect. Governments successfully strengthened and adapted food, health, water and sanitation, education, and social protection systems, to maintain or even expand these critical systems to protect nutrition among the most vulnerable groups. Community-based actions were leveraged to build trust, tackle misconceptions, and bring services closer to where vulnerable women and children live. The use of innovative digital technologies and strong coordination platforms made systems more adaptable in the face of a crisis.

LESSONS LEARNED

The analysis of country experiences provides valuable lessons learned on the absorptive, adaptive, and transformative capacities of systems that safeguard nutrition during polycrisis:

1. **All systems have the potential to be resilient.** For all five systems—food, health, water and sanitation, education, and social protection—there are country examples of resilience in safeguarding nutrition. For instance, in Ethiopia and Nigeria, governments extended financial support measures, such as short-term, low-interest loans, to micro-, small- and medium-sized enterprises to enhance resilience of food supply chains.

2. **Countries with the flexibility to leverage nutrition interventions across multiple systems were well placed to be able to safeguard nutrition.** For example, in Ghana, the health and education systems worked together to deliver iron-folic acid supplements to adolescents. In Peru, coordinated efforts between the food and social protection systems were made to scale-up fortified food production and distribution to meet the growing demand for social assistance.

3. **Prioritizing the most vulnerable groups, particularly through the social protection system, was an important factor.** To support women in South Africa, the government expanded the eligibility criteria for its Child Support Grant, benefitting an additional seven million people, nearly all of them women, who received child support. School meal programs faced immense challenges during the pandemic with the closure of schools around the world. Many countries, such as the Bahamas, Brazil, Cambodia and Kenya, pivoted to using alternative delivery platforms.

4. **Expanding and strengthening local capacities and empowering communities were key strategies.** In Indonesia, the health system adapted its programme for screening and early detection of child wasting from a community health worker to a family-centred approach. Community health workers trained caregivers to detect wasting in children at home using colour-coded measuring tapes.

5. **Shared management information systems, innovative technologies, collaborative platforms and swift decision-making were enabling factors that made systems more resilient.** In South Africa, the application process for social protection was digitized to manage the massive influx of applicants and expand the number people whose livelihoods or incomes were affected by the COVID-19 pandemic.

RECOMMENDED POLICY AND PROGRAMME ACTIONS

Drawing from these lessons, the report offers several policy and programme actions to strengthen the nutrition resilience of systems, before, during, and after a crisis:

1 Put in place policies and programmes that enable all systems to be **adaptive, absorptive, and transformative** in the face of future shocks and crises. This includes developing risk-informed country-led plans, policies and actions that consider the system level changes needed to prepare for future shocks, informed by the lessons learned during the polycrisis.

2 Increase the resilience capacity of key systems—especially the food, health, and social protection systems—to maximize the prevention of malnutrition in countries most vulnerable to polycrisis, including:

- **Transforming food systems** so that they can continue to provide and promote nutritious, safe, affordable and sustainable diets, including in times of crisis.
- **Reinforcing the capacity of the health system** to protect, promote and support optimal infant and young child feeding and caregiving practices and healthy diets and lifestyles among children, adolescents and women of reproductive age.
- **Strengthening (or establishing) school nutrition programmes** that provide healthy school meals and snacks, including supportive behaviour change communication and interventions to prohibit the sale and advertisement of ultra-processed foods in and around schools.
- **Leveraging social protection policies and programmes** to reach the most vulnerable, especially poor households with women and children, to offset the inequities that are often exacerbated by crises.

3 Strengthen the predictability and flexibility of funding, also for crisis situations, to enable the building of stronger and more resilient systems. Global efforts to mobilize resources to build stronger and more resilient systems that have the flexibility to respond, including during times of crises, are important in working towards sustainable solutions and protecting those most at risk.

4 Strengthen the capacity, engagement, and empowerment of communities as participants and contributors to the nutrition resilience of systems. Country experiences with the Ebola crisis, the COVID-19 pandemic and conflict, show the importance of community leadership and accountability in fostering resilient systems that continue to contribute to nutrition outcomes in the face of shocks and crisis.

5 Strengthen data collection and build robust information systems to better target vulnerable households before, during and after crisis and to measure changes in access to nutritious foods, essential services, and positive practices before and after shocks.

CONCLUSION

Amid the devastating polycrisis that has disproportionately impacted the most vulnerable, notably children and women, and left the world grappling to recover, many countries demonstrated the capacity of their systems to absorb, adapt, and (to a lesser extent) transform in response to shocks in ways that have safeguarded access to nutritious diets, essential nutrition services necessary for good nutrition, and positive care practices for the most vulnerable families. These achievements were not accidental; they were the result of purposeful investments in strengthening programmes, policies, and synergies of and between multiple systems to make them better equipped and more accountable for nutrition results.

UNICEF/UN0[illegible]92/Mojtba Moawia Mahmoud

CHAPTER 1

NUTRITION RESILIENCE

Strengthening systems to safeguard the nutrition of vulnerable children, women, families and communities in the context of polycrisis

The world is facing a polycrisis that is jeopardizing the nutrition and well-being of the most vulnerable children, women, families and communities. Since 2020, the combined impacts of the COVID-19 pandemic, climate crises, conflicts (including the war in Ukraine) and the global food and nutrition crisis are threatening the nutrition resilience of the systems that support good nutrition for children and women in the worst affected countries.

The polycrisis comes on the heels of two decades of progress in improving maternal and child nutrition.

Between 2000 and early 2020 (pre-pandemic) in low- and middle-income countries (LMIC), the number of children under 5 years of age with stunting fell from 204 million to 149 million,[a] driving the global prevalence of stunting down from 33 to 22 per cent.[1] Similarly, the percentage of infants benefiting from exclusive breastfeeding during the first 6 months of life increased from 35 per cent in 2000 to 49 per cent in 2019 in LMIC.[2] These achievements show that progress for nutrition is possible through the scale-up of evidence-based actions.

a The 2020 child malnutrition data are from the 2021 Joint Malnutrition Estimates (JME) which were predominantly collected before 2020 and do not take into account the impact of the COVID-19 pandemic. The 2023 JME restated data for 2020 and partly accounts for the impact from the pandemic.

Polycrisis

Multiple crises occurring simultaneously, which interact in ways that make the whole more overwhelming than the sum of the parts.

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Despite these important gains, the proportion of children and women affected by all forms of malnutrition remains unacceptably high – and progress is too slow to achieve the 2025 World Health Assembly Global Nutrition targets and the 2030 Sustainable Development Goals, including an end to hunger and malnutrition in all its forms. Even before the pandemic, more than 3 billion people could not afford a healthy diet;[3] half of preschool children and two-thirds of adolescent girls and women 15–49 years of age were affected by micronutrient deficiencies;[4] one-quarter of babies (35 million) were born too small or too soon;[5] 149 million children under 5 were affected by stunting (chronic malnutrition); 45 million children suffered from wasting (acute malnutrition); and another 136 million children aged 5–9 years were living with overweight or obesity.[1,6]

Today, progress is at risk of being further derailed by the ongoing polycrisis, which is challenging the capacities of national systems to protect the nutrition of the most vulnerable children and women.

WHAT DOES THE POLYCRISIS LOOK LIKE – AND HOW IS IT IMPACTING NUTRITION?

This report refers to a polycrisis as the multiple, sustained and cascading crises – namely, the combined impacts of the COVID-19 pandemic, climate crises, protracted conflicts that deepen food insecurity, and the ensuing global food and nutrition crisis – that are undermining maternal and child nutrition in many countries. Since 2020, this polycrisis has disrupted the systems that support the nutritional well-being of millions of women and children across vulnerable contexts and exacerbated the risk of malnutrition.

The unprecedented scale of the COVID-19 pandemic had a devastating impact globally. It occurred at a time when ongoing crises – some protracted – were already threatening the resilience of vital systems. The pandemic not only had direct health and nutrition impacts on women and children, but the resulting government and household mitigation measures, particularly the lockdowns and containment measures, triggered economic, health and social losses.

In 2022, as nations emerged from pandemic-related disruptions, they were faced with the disastrous secondary effects of the war in Ukraine on global food systems, which exacerbated the food security and nutrition challenges facing vulnerable communities and moved healthy diets further out of reach. Disruptions to global trade for food, fuel and fertilizer led to record-high food prices, particularly in LMIC that are highly dependent on imports. Families in these countries were disproportionately affected by the increased price and reduced availability of and access to food, as most already spent a larger proportion of their income on food than those in high-income countries.[7] People living in countries facing protracted conflicts were particularly vulnerable to the effects of escalating food prices, including those living in Afghanistan, Ethiopia, Myanmar and Yemen.

Over the last few years, severe climate crises have increased in frequency and intensity,[8] such as the catastrophic flooding in Pakistan, the extended droughts in the Sahel and Somalia, and the destructive Hurricane Freddy in Mozambique and Malawi. Millions of people in LMIC also face seasonal cycles of food and nutrition insecurity due to climate-related crises. In these contexts, the polycrisis has deepened the risk of malnutrition and exacerbated inequities for the most vulnerable, such as women, children, people living with disabilities or chronic infections, and displaced populations.

Nutrition resilience

The capacities that enable multiple systems – food, health, water and sanitation, education and social protection – to prepare for, respond to, and recover from crises, in ways that safeguard diets, services and practices and contribute to equitable nutrition outcomes, with a focus on the most vulnerable.

DISRUPTIONS TO THE FRAGILE SYSTEMS THAT SUPPORT ACCESS TO NUTRITIOUS FOODS, ESSENTIAL SERVICES, AND POSITIVE PRACTICES

In addition to the direct health and economic impacts, the polycrisis disrupted the systems that support access to nutritious foods, essential services for nutrition, and positive feeding and care practices[b] for children and women. Disruptions to these key systems – including the food, health, water and sanitation, education and social protection systems – had important consequences, such as higher food prices, constrained access to essential services necessary for good nutrition, and reduced access to food during school closures among children receiving school meals. Such compounding multi-systems disruptions dramatically increased the risk of poverty and food and nutrition insecurity, particularly for the youngest, the poorest and the most marginalized.

In their attempts to respond to the polycrisis, particularly the COVID-19 pandemic, many governments had to prioritize limited resources. In some cases, resources for nutrition support had to be redirected to address the health and economic impact of the COVID-19 pandemic, even though nutrition services and the systems that support them were already under-resourced. These resource shifts may have constrained human resources, hampered the supply of critical inputs (such as food assistance or medicine), and reduced the overall resilience capacities of these systems to cope with the polycrisis.

At the same time, governments and their development partners also worked collaboratively to strengthen the national-level systems that support nutrition and leverage alternative delivery mechanisms to better reach the most vulnerable and marginalized populations with food and essential services necessary for good nutrition. Much can be learned from these country experiences, and this report takes a deeper dive into these stories of resilience.

TOWARDS RESILIENT SYSTEMS TO PREPARE FOR, RESPOND TO AND RECOVER FROM CRISES

This report presents policy and programmatic evidence and insights on the extent to which the recent polycrisis has led to disruptions of the food, health, water and sanitation, education, and social protection systems. It describes how these systems responded and the impact of the polycrisis on the nutrition and food insecurity of the most vulnerable populations.

This report frames nutrition resilience at the systems level, defining it as: the capacities that enable multiple systems – food, health, water and sanitation, education, and social protection – to prepare for, respond to, and recover from crises, in ways that safeguard diets, services

b These include positive nutrition and care practices, such as exclusive breastfeeding for the first 6 months of life; continued breastfeeding from 6 months to age 2 and beyond; responsive feeding of nutritious and diverse complementary foods beginning at 6 months of age; positive hygiene practices; cognitive stimulation for early childhood development, etc.

and practices, and contribute to equitable nutrition outcomes, with a focus on the most vulnerable. This definition builds on the United Nations Common Guidance on Helping Build Resilient Societies (Box 1).

A system's capacity for resilience in the face of shocks can be described as absorptive, adaptative, or transformative (Box 1). The systems that support the delivery of nutrition interventions may demonstrate elements of all (or none) of these three capacities along a continuum, depending on the crisis. For example, some social protection systems have policies in place that call for cash to be distributed to vulnerable households in response to shocks (absorptive); others may adapt their modes of delivery or expand eligibility criteria to include additional groups (adaptive); and some may restructure their systems entirely to address systemic inequities that have previously excluded vulnerable groups (transformative).

The report uses these broad concepts of absorptive, adaptive or transformative capacities to analyse the resilience of systems that support nutritious diets, nutrition-related services, and positive feeding and care practices. This shifts the focus of nutrition resilience towards systems rather than on the affected people themselves. Drawing on this analysis and the experiences of countries, the report also offers policy and programmatic lessons for strengthening systems before, during and after a crisis.

The next chapters of this report are structured as follows:

- **Chapter 2** synthesizes evidence on the impact of the polycrisis on nutrition outcomes, the determinants of nutrition, and the systems that support access to nutritious foods, essential services necessary for good nutrition, and promote positive feeding and care practices.
- **Chapter 3** analyses country experiences and synthesizes lessons learned to describe how systems responded to safeguard nutrition in the context of the polycrisis.
- **Chapter 4** offers reflections and recommendations for building more resilient systems to support nutrition for the most vulnerable children, women and families.

The data and information collection methodology used for this report is described in Annex A.

BOX 1

United Nations Common Guidance on Helping Build Resilient Societies (2020)[9c]

Absorptive capacity. The ability of systems to take protective action and 'bounce back' after a shock using predetermined responses to preserve and restore essential basic structures and functions. It involves anticipating, planning, coping and recovering from shocks and stresses.

Strategies and policies are put in place prior to any crisis. Example 1: Community food storage facilities are built to reduce food waste and loss, offering a reserve when a shock disrupts access to local markets. Example 2: The health system develops a supply chain that permits switching from dispensing a single month to multi-month supply of nutritional supplements to pregnant women in times when access to health facilities is disrupted to ensure they have sufficient supply until access improves.

Adaptive capacity. The ability of systems to make incremental adjustments, modifications, or changes to the characteristics of systems and actions to moderate potential changes, in order to continue functioning without major qualitative changes in function or structural identity.

Strategies and policies are agile and can be adapted when a crisis hits. Example: When schools close because of a shock, the education system might adapt its school meal programme to deliver food directly to households or allow parents to pick up meals at school, ensuring students continue to get the food they would have received during the school day.

Transformative capacity. Transformative capacity is required when the change needed goes beyond the system's anticipatory, absorptive, adaptive and preventive abilities and when there is recognition that underlying ecological, economic or social structures and underlying inequities keep people trapped in a vicious circle of poverty and vulnerability. It is the ability to make lasting structural changes that address the underlying structural barriers to improving diets, services and practices.

Strategies and policies are fundamentally changed, addressing systemic inequities. Example: A food system transformation may undertake a fundamental shift to ensure gender equality in access to assets, loans, agricultural supplies, capacity building, and decision-making power to ensure equitable access and benefits to women in the production, processing and consumption of nutritious foods.

c This report builds on three relevant resilience capacities of the five capacities described by the United Nations

CHAPTER 2

THE IMPACT OF THE POLYCRISIS ON NUTRITION

This chapter synthesizes the available evidence to assess the extent to which the polycrisis of the past three years – the combined impacts of COVID-19 pandemic, climate crises, protracted conflicts and the ensuing global food and nutrition crisis – is jeopardizing 20 years of nutrition progress.

Drawing on the UNICEF Conceptual Framework for Maternal and Child Nutrition,[10] we explore how the polycrisis has impacted nutrition outcomes, the underlying determinants of nutrition, and the systems that support them.

Our findings show how the polycrisis has undermined the availability, accessibility and affordability of food and nutritious diets; access to and availability of nutrition-related services; and feeding and care practices. This chapter describes four key findings that illustrate the impact of the polycrisis on maternal and child malnutrition.

FINDING 1.

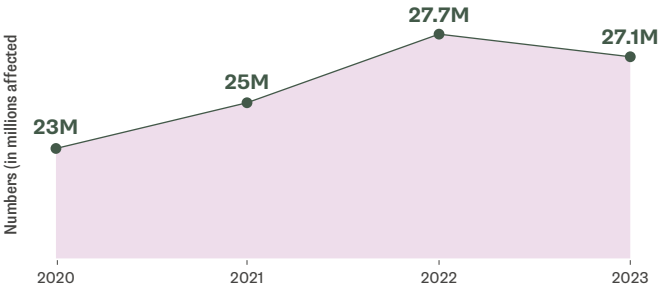
Acute malnutrition[d] among children, adolescent girls and women increased by 20–25 per cent between 2020 and 2022 in the countries most affected by the global food and nutrition crisis

The polycrisis has undermined important gains made in reducing maternal and child malnutrition, particularly in fragile and humanitarian contexts.[e] In the countries hardest hit by the global food and nutrition crisis, acute malnutrition is threatening the lives of more children and women today than before 2020.

ACUTE MALNUTRITION IN CHILDREN INCREASED BY 20 PER CENT BETWEEN 2020 AND 2022 IN THE COUNTRIES MOST AFFECTED BY HUMANITARIAN CRISES

The food and nutrition crisis has deepened children's vulnerability to acute malnutrition. An analysis of 19 countries with comparable data[f] across the last three years shows a staggering 20 per cent increase in the number of children suffering from acute malnutrition, from 23.0 million pre-pandemic in 2020 to 27.7 million in 2022. The 19 countries include Afghanistan, Burkina Faso, Central African Republic, Chad, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Mali, Mozambique, Myanmar, Niger, Nigeria, Somalia, South Sudan, Sudan, Syrian Arab Republic, Uganda and Yemen.[g] While the data show a slight decline to 27.1 million in early 2023, the outbreak of new conflicts, such as those in Sudan, the Democratic Republic of the Congo and Gaza are likely to have caused a further increase in the number of children suffering from acute malnutrition in 2023 (Figure 1).

Figure 1. The number of acutely malnourished children rose sharply and remains above pre-pandemic levels



Estimated burden of acute malnutrition (measured as Global Acute Malnutrition): number of acutely malnourished children under 5 years of age across 19 countries in humanitarian crisis, 2020 to early 2023.[15] Global acute malnutrition is a measure of the total burden of acute malnutrition in children under 5 years of age.[16]

d Acute malnutrition is a form of undernutrition caused by a decrease in food consumption and/or illness that results in sudden weight loss or oedema.[11] In children <5 years old, acute malnutrition comprises wasting and nutritional oedema, measured through a low weight-for-height (WHZ) or weight-for-length z-score (WLZ) (more than 2 standard deviations below the median of the WHO child growth standards (WHZ or WLZ < -2)) and/or having nutritional oedema and/or low mid-upper arm circumference (MUAC) (less than 125mm).[12] Wasting is the most sensitive indicator for detecting acute malnutrition in children. In adult women >19 years old and adolescent girls 10–19 years old, acute malnutrition reflects underweight or thinness, measured through low weight-for-height/BMI (<18.5 or <17.0, respectively) and/or low MUAC.[13,14]

e The 2023 UNICEF / World Health Organization (WHO) / World Bank Group Joint Child Malnutrition Estimates do not show a significant increase in children suffering from acute malnutrition globally, going from 46.4 million in 2020 to 45 million in 2022. The JME are a global compilation of national surveys. Due to COVID-19 pandemic lockdowns and social distancing measures, the number of national surveys conducted during this period was likely impacted. As described by the JME, gaps in the available data in some regions make it challenging to accurately assess progress towards global targets.[1] In addition, estimates of acute malnutrition do not reflect cumulative cases of acute malnutrition that occur over the course of a year. Acute malnutrition is a relatively short-term condition, so cross-sectional surveys may miss episodes, as they only capture children who are acutely malnourished at the time of the survey. As a result of this timing issue, the global estimates should be viewed as an underestimate of the number of children affected by acute malnutrition over the course of the year.

f Global Acute Malnutrition estimates for 2020–2022 were compiled from a) Humanitarian Needs Overviews and Humanitarian Response Plans (HNO/HRP); b) operational country Nutrition Cluster reporting to the Global Nutrition Cluster (GNC); and c) data from the Integrated Food Security Phase Classification Acute Malnutrition (IPC AMN) classification. These data include both prevalence and incidence data, and thus do not allow for a direct comparison with figures from the Joint Malnutrition Estimates. Estimates for 2023 are based on data from the end of 2022. Data do not include the likely impact of the 2023 conflicts in Sudan and the Democratic Republic of the Congo.

g The 19 countries were included based on the availability of incidence and/or prevalence data on acute malnutrition (with country-specific correction factors being applied), for the years 2020–2022 from either Humanitarian Needs Overviews (HNO)/HRP, GNC or IPC AMN. Other countries that experienced a humanitarian crisis during this period may be excluded from this set due to the lack of available and/or comparable data.

RECENT ANALYSES ALSO SHOW THAT THE RISK OF WASTING INCREASES WITH RISES IN THE REAL PRICE OF FOOD

The risk of a child becoming acutely malnourished increases when the price of food increases. An analysis of 20 years of Demographic and Health Survey data on acute malnutrition (1990–2018) for 44 LMIC showed that a 5 per cent increase in the real price of food (according to FAO food price index data) raises the risk of moderate and severe acute malnutrition in children under 5 years of age by 9 per cent, and the risk of childhood severe acute malnutrition by 14 per cent.[17,18]

BOX 2

A note on data availability and comparability

Obtaining an accurate estimate of the global impact of the polycrisis on malnutrition is challenging due to issues of data availability and comparability across countries and years.

The data presented in this report come primarily from global reports such as the Joint Malnutrition Estimates, the State of Food Security and Nutrition in the World, and the Global Report on Food Crises, supplemented by smaller, regional or country data from Humanitarian Needs Overviews/Humanitarian Response Plans, the Global Nutrition Cluster and the Integrated Phase Classification for Acute Malnutrition.

Most reports use different data sources and data are only available for varying sets of countries. Data sources and the number of countries with data are noted in the text and referenced in the report.

Systematic collection of nutrition data was a challenge even prior to the COVID-19 pandemic, due to insufficient data collection infrastructure, poor accessibility, and limited coverage because of insecurity and/or natural hazards as well as resource constraints, lack of standardization and comparability, and challenges related to data quality and reliability.

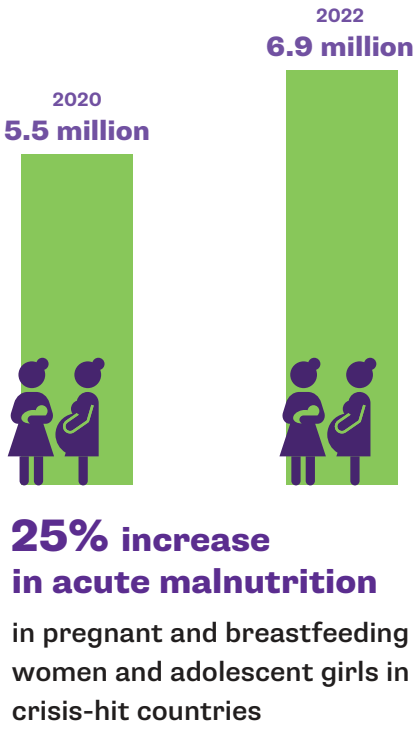
The COVID-19 pandemic exacerbated existing challenges for systematic data collection and surveillance. The pandemic disrupted routine data collection efforts, including anthropometric measurements. Lockdowns, travel restrictions, and social distancing measures made it difficult to conduct surveys and gather data, leading to gaps in monitoring of nutritional status.

ACUTE MALNUTRITION IN PREGNANT AND BREASTFEEDING WOMEN AND ADOLESCENT GIRLS ROSE BY 25 PER CENT IN THE COUNTRIES MOST AFFECTED BY THE GLOBAL FOOD AND NUTRITION CRISIS

Acute malnutrition in the form of underweight in women was slowly declining in the years leading up to the polycrisis; however, a dramatic increase was seen between 2020 and 2022 in 12 of the countries[h] most affected by the food and nutrition crisis. During this period, the number of pregnant and breastfeeding women and adolescent girls suffering from acute malnutrition increased dramatically, from 5.5 million to 6.9 million – or 25 per cent (Figure 2).

Enduring gender inequalities have been exacerbated by the polycrisis, further undermining nutrition for the most vulnerable women and adolescent girls and resulting in the rise in acute malnutrition (Box 3).

Figure 2. Acute malnutrition rose by 25 per cent among pregnant and breastfeeding women and adolescent girls in crisis-hit countries



Number of acutely malnourished pregnant and breastfeeding women and adolescent girls in 12 countries most affected by the food and nutrition crisis, 2020 and 2022.[19] These survey estimates are usually based on estimates of the percentage with low MUAC.

h The 12 countries in order of increasing numbers of malnourished pregnant and breastfeeding women and adolescent girls: Mali, Niger, Kenya, Nigeria (North-east), Burkina Faso, Chad, Somalia, South Sudan, Afghanistan, Sudan, Yemen, Ethiopia.

FINDING 2

The polycrisis disrupted food systems, spiked food insecurity and put healthy diets further out of reach for vulnerable families

The increasingly complex, global connectivity of food systems makes them particularly vulnerable to shocks. The COVID-19 pandemic and other shocks related to climate change and conflict caused disruptions in supply chains between 2020 and 2022, which affected food stocks and led to food price increases. Lockdowns resulted in loss of employment and income, particularly among the urban poor working in the informal sector, and impeded small-scale farmers from selling their products. This combination of reduced food availability, increased food prices and lost income spiked food insecurity levels.

SINCE THE START OF THE POLYCRISIS, 391 MILLION MORE PEOPLE ARE LIVING IN FOOD INSECURITY – A THREE-YEAR PERSISTENT HIGH

Globally, about 2.4 billion people – or 29.6 per cent of the world's population – were moderately or severely food insecure in 2022, which is 391 million more than in 2019.[20] After a sharp rise of almost 341 million in the first year of the COVID-19 pandemic, the number of people who were moderately or severely food insecure[i] continued to increase in the wake of the polycrisis, with an additional 35 million classified as food insecure in 2021 and 14.4 million in 2022.[j]

In countries affected by the global food and nutrition crisis, the number of people facing acute food insecurity increased four years in a row, nearly doubling from 135 million people in 55 countries in 2019 to 258 million people in 58 countries in 2022 – which is one in every four people among the analysed population.[23]

BOX 3

Gender spotlight: Disproportionate impacts on women and girls in the wake of the polycrisis

Gender inequality perpetuates malnutrition and malnutrition perpetuates gender inequality. Shocks such as the COVID-19 pandemic, conflict and severe climate events – and the ensuing disruptions – create compounding crises that reinforce the inequities and gaps in women's and girls' nutrition.[24] A range of gender disparities widened during the polycrisis:

- During the first two years of the pandemic, the food insecurity gender gap increased by nearly 2.5 times, with an estimated global increase from 48.5 million in 2019 to 119.1 million more food insecure women than men in 2021.[25]
- Data from 40 countries showed that 36 per cent of women stopped working during the pandemic compared with 28 per cent of men, due to shutdowns of schools, childcare centres and local markets.[26]
- By 2021, an estimated 47 million additional women and girls fell into poverty.[27]
- Only 12 per cent of pandemic social protection responses specifically targeted women's economic security.[19]
- During the pandemic, young women (aged 18–24) were less likely to receive cash assistance from social protection programmes than young men (9 versus 21 per cent) and were less likely to receive unemployment insurance (only 5 versus 18 per cent).[28] These disparities are driven by the orientation of social protection programmes to those engaged in the formal economy, which fails to reach the majority of women working in the informal economy.
- The longer schools are closed, the higher the risk that girls will not return due to economic and social pressures. In some LMIC, school closures put girls at increased risk of child marriage and adolescent pregnancy, with a subsequent increased risk of health issues and mortality for themselves and their babies.[29,30]

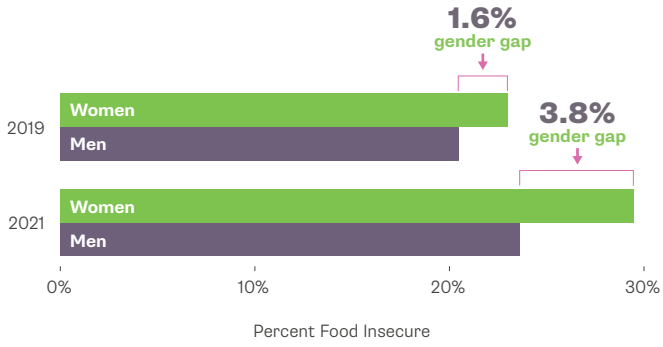
i Moderate food insecurity refers to the level of severity of food insecurity, based on the Food Insecurity Experience Scale (FIES), at which people face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. It thus refers to a lack of consistent access to food, which diminishes dietary quality, disrupts normal eating patterns, and can have negative consequences for nutrition, health and well-being. Severe food insecurity refers to the level of severity of food insecurity at which people have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating, putting their health and well-being at grave risk, based on the FIES.[20]

j These data use FIES methodology, which reflects the prevalence of food insecurity in the global population[21] based on how respondents (households or individuals) experience their ability to access adequate food.[22]

FOOD INSECURITY IS TAKING THE GREATEST TOLL ON WOMEN

There is a persistent gender gap in food security. This gap was particularly stark in 2021, with 119 million more women affected by food insecurity than men. Although the food insecurity prevalence gap across women and men narrowed considerably from 3.8 percentage points in 2021 to 2022 to 2.4 percentage points, it remained higher than the pre-pandemic gap of 1.6 percentage points in 2019. By 2022 the prevalence of adult women who were moderately or severely food insecure was 27.8 per cent compared to 25.4 per cent for men (Figure 3).[20]

Figure 3. The gender gap for women's food insecurity more than doubled during the pandemic



Gender gap in moderate and severe food insecurity, 2019–2021[25]

THE POLYCRISIS CAUSED A SURGE IN FOOD PRICES AND LEFT MORE THAN 40 PER CENT OF THE WORLD'S POPULATION UNABLE TO AFFORD A HEALTHY DIET

The cost of a nutritious diet rose 6.7 per cent between 2019 and 2021 due to the continued economic impacts of the polycrisis. The rising costs and concurrent income losses due to the pandemic made nutritious diets unaffordable for 134 million more people in 2021 than in 2019, primarily those living in Southern Asia and in Eastern and Western Africa.[20] In 2021, it was estimated that a total of 42 per cent of the world's population, or more than 3.1 billion people, could not afford a healthy diet.[20]

The share of the population unable to afford a healthy diet in 2021 continued to be considerably higher in low- and lower-middle-income countries (86.1 and 70.2 per cent, respectively) compared to upper-middle- and high-income countries (14.1 and 1.3, respectively).

The low- and lower-middle-income countries accounted for the majority of people who, due to the polycrisis, were no longer able to afford a healthy diet between 2019 and 2021. At the same time a healthy diet became even further out of reach for those who could not afford it prior to the crisis. During the same period small improvements were observed in upper-middle-income- and high-income countries.[20]

The heavy reliance on food imports by many countries intensified the impact of the polycrisis on the availability of nutritious foods.[31] The war in Ukraine further compounded the food crisis, as it resulted in a dramatic decline in grain exports by two main producers, the Russian Federation and Ukraine, which drove global prices up sharply.[32]

While the impact of the dramatic increase in food prices was global, there was a relatively greater impact in countries dependent on wheat imports, such as Egypt and Yemen. Staple food prices in sub-Saharan Africa surged by an average of 24 per cent between 2020 and 2022 – the greatest increase since the 2008 global financial crisis.[33] Box 4 provides examples of how rising food costs have impacted the cost of a nutritious diet in various settings.

BOX 4

Nutritious diets were increasingly out of reach for households

Ghana: Food price inflation resulted in a 78 per cent increase in the cost of meeting energy (kcal) needs and a 46 per cent increase in the cost of meeting nutrient needs between 2021 and 2022.[34] By late 2022, at least one in two households was not able to afford the cost of a nutrient-adequate or healthy diet.[k]

Philippines: The cost of a nutrient-adequate diet has more than doubled, from US$4.00 per day in 2019 to US$8.47 per day in 2022, with variations across regions.[36] This resulted in two-thirds of households (67 per cent) unable to afford nutrient-adequate diets, compared with 32 per cent in 2019.

Sri Lanka: The cost of a nutrient-adequate diet has nearly tripled since 2016, making it increasingly difficult for families to afford nutritious foods.[37] Nearly half of the population (47 per cent) could not afford a nutrient-adequate diet in 2022 – four times more than in 2016.

k An energy-only or energy-sufficient diet meets only the caloric needs for daily survival; A nutrient-adequate diet reflects a nutritious diet that meets individuals' nutritional needs (estimated using the linear optimization software Cost of the Diet (CotD)); A healthy diet meets the nutritional standard as set by national food-based dietary guidelines, being both energy and nutrient-sufficient (calculated using the Healthy Diet Basket)[34,35]

FINDING 3

The quality of diets plummeted during the polycrisis, especially for children and women

The effects of the pandemic, climate change and multiple crises on food security and food prices translated into an overall deterioration in diet quality for all population groups – including young children and pregnant and breastfeeding women. As with past crises, many households were forced to cope with high food prices by reducing their consumption of more expensive nutritious foods, such as animal-source foods, while buying more lower-cost, less nutritious staples, such as grains.[38-40] This short-term coping strategy can have severe consequences for the nutrient density and overall diet quality of vulnerable groups at risk of micronutrient deficiencies, including pregnant and breastfeeding women and infants and young children, who have the highest nutrient requirements to support their rapid growth and development.

CHILDREN, ADOLESCENTS AND PREGNANT AND BREASTFEEDING WOMEN CONSUMED LESS NUTRITIOUS AND DIVERSE DIETS

Dietary diversity decreased, as many children and adolescents ate fewer food groups during the polycrisis. While country-specific data on diet quality and dietary diversity are limited, and mostly from studies that are not nationally representative, they provide some indication of reduced dietary quality.

According to a subnational study in six Eastern and Southern African countries during 2021, 73 per cent of children between 2 and 18 years of age consumed a lower diversity of foods than before the COVID-19 pandemic.[39] Another subnational survey, in these same six countries during the same period, showed that 82 per cent of children between 2 and 18 years of age and 84 per cent of pregnant and breastfeeding women reduced their consumption of one or more nutritious food groups due to the pandemic.

THE DIETS OF YOUNG CHILDREN WERE JEOPARDIZED AMID THE POLYCRISIS

The diet quality of children 6-23 months has remained stubbornly poor for over a decade, with only 24 per cent of children aged 6-23 months consuming a minimally diverse diet[l] in 2020 (pre-pandemic), up only slightly from 21 per cent in 2010.[40]

The COVID-19 pandemic and the ensuing global food and nutrition crisis further eroded access to nutritious, diverse foods for young children. For example, in the urban slums in Jakarta, Indonesia, the number of children aged 12-23 months who were fed a diet that met minimum dietary diversity fell from 81 per cent in 2018 to 55 per cent in 2020, with reductions in nutrient-dense foods such as eggs, fish and/or meat, dairy products and pulses or nuts.[40]

BREASTFEEDING PRACTICES WERE IMPACTED

Very few nationally representative data on breastfeeding are available to facilitate a comparison with the pre-polycrisis period. However, some evidence and programme experiences suggest that breastfeeding practices were impacted by the polycrisis.

Breastfeeding practices were constrained in some contexts due to clinical practices that separated mothers and babies postpartum to prevent COVID-19 contagion[42] and rates of exclusive breastfeeding fell in some contexts.[43] Clinical guidance in several countries was not aligned with WHO breastfeeding guidelines during the COVID-19 pandemic;[42] indeed, in some countries, national COVID-19 guidelines even discouraged breastfeeding.[44] There was also a marked increase in the digital marketing of formula milk during the COVID-19 pandemic, which may have contributed to reduced breastfeeding rates.[44]

In other countries, breastfeeding rates appear to have improved due to movement restrictions, the limited availability and increased cost of formula, fear of formula contamination, or because women understood that breastmilk offered the best protection to their children.[43]

FINDING 4.

Essential services for good nutrition were disrupted for millions during the polycrisis – with social protection systems particularly challenged to meet increased needs

The polycrisis severely impaired the ability of women and children to access the essential services needed for good nutrition, including those delivered through the food, health, water and sanitation, education and social protection systems (Figure 4). Each system is vulnerable to different types and scales of shocks; however, because the systems are interconnected, disruptions in one system can affect others, which could have magnified the impact on nutrition-related services.[m]

Figure 4: Polycrisis impacted the systems that support diets, services and practices for women and children

l Minimum dietary diversity is defined as the percentage of children 6-23 months of age consuming foods and beverages from at least five out of eight defined food groups during the previous day.[41]

m Food system disruptions are addressed in Finding 2, while disruptions in other systems are addressed here. Although most of the disruption data is from the COVID-19 pandemic, other shocks, such as conflicts or severe climate events, similarly disrupt systems.

EXTENDED HEALTH SYSTEM DISRUPTIONS REDUCED ACCESS TO ESSENTIAL NUTRITION INTERVENTIONS

Ninety per cent of the 105 countries responding to a 2020 WHO survey reported disruptions to essential health services during the pandemic's first year. Disruptions were due to prioritizing treatment for COVID-19, the distancing measures required and staff unavailability.[45] Lower-income countries were particularly affected: nearly half (45 per cent) of low-income countries and nearly a third (30 per cent) of lower-middle-income countries reported disruptions to at least 75 per cent of essential health services, compared with only 4 per cent of high-income countries reporting disruptions. About half of the 105 countries reported disruptions to essential services for the prevention and treatment of acute malnutrition.

Even by the end of 2021, nutrition services delivered through health systems had not returned to their pre-pandemic levels, according to a follow-up WHO survey of 91 countries across income levels with data for the previous survey rounds.[46] Health systems continued to struggle to provide nutrition-related services, and the population also struggled to access these services as pandemic mitigation efforts restricted mobility.

In six South Asian countries (Afghanistan, Bangladesh, Nepal, India, Pakistan and Sri Lanka), coverage of key maternal and child health interventions, including antenatal care and immunizations, decreased by up to 60 per cent during the pandemic, with the largest disruptions observed between April and June 2020.[47] This was followed by a period of recovery from July 2020 through March 2021, but disruptions rose again to similar levels during the next COVID-19 wave starting in April 2021.

IN MOST COUNTRIES, THE WATER AND SANITATION SYSTEM WAS NOT EQUIPPED TO PROVIDE BASIC ACCESS TO WASH SERVICES FOR VULNERABLE HOUSEHOLDS DURING THE PANDEMIC

Systems that promote safe water, sanitation and hygiene (WASH) practices are critical to nutrition as they help reduce the spread of infectious diseases such as diarrhoea, which are major risk factors for childhood malnutrition. In fact, children under 5 years of age are more than 20 times more likely to die from unsafe water and poor sanitation than from conflict.[48]

Worldwide, governments took active measures to promote handwashing with soap and other infection prevention and control measures during the pandemic. According to a 2020 review of WASH responses in 84 LMIC, 94 per cent of countries had adopted at least one hygiene promotion and infection prevention and control measure, with large regional differences in the number of measures.[49] However, the availability of soap, water and handwashing facilities to implement these measures was not always assured and support to vulnerable households was weak. In fact, only about one-third (38 per cent) of countries provided basic access to WASH services at scale and 25 per cent of countries only implemented WASH services in limited subnational areas.

A lack of support for and protection of water and sanitation service providers challenged the capacity of service delivery across all sectors during the pandemic. Further, the menstrual hygiene needs of women and girls were scarcely addressed or services were only implemented in limited subnational areas, with only 13 per cent of countries implementing national-scale measures.[49] Interventions were often limited to the distribution of dignity kits, including menstrual hygiene products. Rural areas and informal settlements also received less attention.

EDUCATION SYSTEMS WERE CONSTRAINED AS SCHOOLS CLOSED AND MILLIONS OF SCHOOL CHILDREN LOST THEIR MAIN MEAL

The education system plays an increasingly crucial role in delivering nutritious school meals and health and nutrition services to children and adolescents. In January 2020 (pre-pandemic), one in every two schoolchildren – 388 million children in the 163 countries with available data – received school meals through national programmes.[50]

As schools closed and classroom learning was suspending during the pandemic, many children lost access to one or more daily meals, as well as an integrated package of school health, nutrition and hygiene services, such as weight and height measurements, nutrition and health education, deworming treatment, and micronutrient supplements for adolescent girls and/or anaemia testing.

By April 2020, pandemic-related school closures meant that more than 370 million children in at least 161 countries lost what might have been their main meal of the day.[51] Globally, schools were closed for an average of five months between February 2020 and February 2022.[52] However many LMIC closed schools for more than a year; some, including the Philippines and Uganda, closed for at least two years.[53]

The loss of school meals put additional pressure on food and nutrition security in households with limited resources, particularly in LMIC. Due to economic pressures, households may have encouraged their children to enter the labour market or pushed their girls to marry as a coping mechanism, hampering these children's chances of returning to school.[24,29]

Evidence from the Ebola pandemic and other crises shows that school closures result in increased rates of child marriage, as economic or social pressures mount and households use this as a coping strategy. Early in the pandemic, it was estimated that 10 million more girls would be pushed into early marriage by 2030 due to the impact of the COVID-19 pandemic.[54,55] Findings from a survey in Kenya showed that 16 per cent of girls aged 10–19 did not return to school after the pandemic, compared with only 8 per cent of boys in the survey. More than half of the girls dropped out for economic reasons (inability to pay school fees), while others cited pregnancy (10 per cent) and early marriage (5 per cent).[56]

DESPITE AN UNPRECEDENTED SCALE-UP OF SOCIAL PROTECTION SYSTEMS, NOT ALL CHILDREN AND FAMILIES RECEIVED THE SUPPORT THEY NEEDED

During times of crisis, social protection systems play a vital role in stabilizing family incomes, preventing a decline of food and nutrition security and helping vulnerable individuals and households recover from shocks. The COVID-19 pandemic drastically increased the number of vulnerable individuals and households, meaning that *more people needed a higher level of support, and for a longer period of time.*

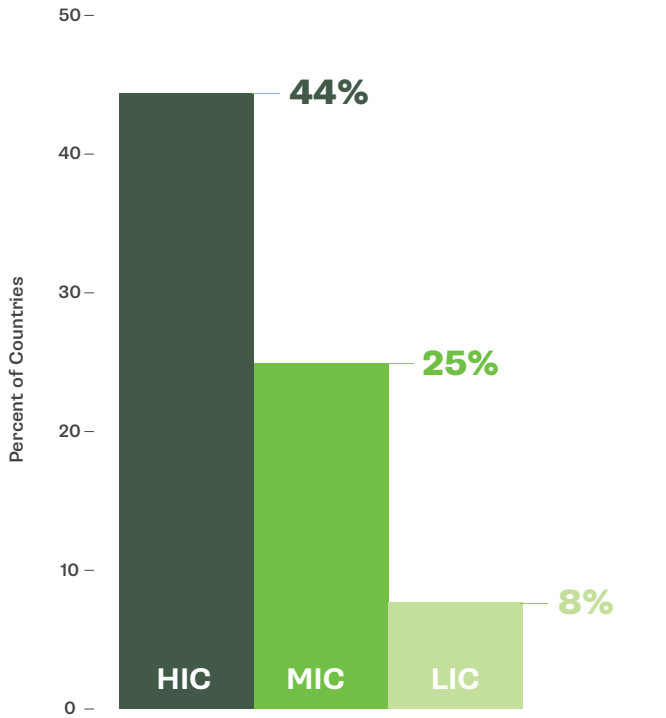
Governments and their partners responded with unprecedented investments in social protection programmes: globally, 223 countries introduced, adapted, or expanded roughly 4,000 social protection or labour programmes.[57] Nearly two-thirds of these programmes were social assistance measures (predominantly cash transfers), which included increasing the value of the cash being provided to vulnerable populations and expanding the programme to new groups to mitigate the impact of the crisis.

The average value

of cash transfers was only US$42 in low-income countries, compared with US$525 in high-income countries.[57]

Low-income, lower-middle-income and upper-middle-income countries reached less than a quarter of their populations with cash transfers during the COVID-19 pandemic, with low-income countries reaching less than 10 per cent of their populations (*Figure 5*). In contrast, high-income countries reached 44 per cent. There were also large differences when looking at absolute funds spent, with high-income countries spending about US$715 per capita – more than 90 times the amount spent by low-income countries, which spent an average of US$8 per capita.[57]

Figure 5: Cash transfer programmes in LMIC reached less than 25 per cent of their populations



Coverage of cash transfers by country income group, as a percentage of the population[57] HIC: High-income countries; MIC: Middle-income countries (lower- and upper-middle-income countries); LIC: Low-income countries.

Cash transfers are critical for both economic recovery and protecting nutrition. World Bank data collected during the pandemic to analyse the impact of cash transfer coverage on poverty and stunting for six South Asian countries (India, Pakistan, Sri Lanka, Maldives, Bhutan, Bangladesh) highlighted that increased population coverage for cash transfers appears to have dampened the impacts on poverty and made a small contribution towards stunting reduction.[58]

WFP/Derrick Botchway

Other social protection programmes included emergency food and social safety nets for vulnerable and marginalized people. However, food assistance programmes were affected by supply chain challenges and funding shortfalls, while donor country budgets were overstretched, reducing the quantity and availability of food that could be purchased for distribution and reducing the reach of the programmes.[59,60]

Many social protection programmes benefited from the use of mobile technology to facilitate registration, assessment, confirmation and timeliness. However, digital payments were not always accessible to people in low-income countries and to the most marginalized populations in other countries, such as those in hard-to-reach or rural areas, or women without access to mobile phones or banking.[61,62]

BOX 5

Financial constraints limit recovery from shocks in LMIC

During the pandemic, lower-income countries suffered the largest declines in income, undertook a high burden of debt to support pandemic mitigation, and have been the slowest to recover.

With record debt levels and high interest rates, more than 60 percent of low-income countries and over 25 percent of emerging markets are in or at risk of debt distress. Debt obligations can limit the ability of countries to address lingering effects of the pandemic and offset high food prices.[63]

As discussed in this chapter, the polycrisis disrupted the systems that support access to nutritious diets, deliver essential services necessary for good nutrition, and promote positive feeding and care practices.

In late 2023, food insecurity levels remain above pre-pandemic levels and continue to be exacerbated by the polycrisis. Maternal and child diets remain poor and food and nutrition insecurity has continued to rise for the most vulnerable population groups, particularly in the areas and countries most affected by ongoing conflict and the global food and nutrition crisis.

BOX 6

Poverty and income inequality soared during the pandemic

- Global median income declined by 4 per cent in 2020, the first decline since the World Bank began measuring median income in 1990.[64]
- The pandemic pushed approximately 60 million more people into extreme poverty, which rose 10 per cent to nearly 719 million people affected in 2020.[64-66] This was the largest one-year increase since monitoring began 30 years ago.
- Poverty increased the most in low-income countries – and due to the continued polycrisis, around 60 per cent of LMIC still had higher levels of poverty in 2022 than before the pandemic.[64]
- The poorest 40 per cent of the population lost double the income of the wealthiest 20 per cent during the first two years of the pandemic and are projected to be the last to recover.[64]

Despite the immense challenges, many countries have adapted and responded to the polycrisis in ways that demonstrate their capacity for resilience. Much can be learned from their experiences, and these lessons are explored further in the next chapter.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CHAPTER 3

BUILDING RESILIENT SYSTEMS TO SAFEGUARD NUTRITION

Learning from country experiences

Many governments responded in extraordinary ways to safeguard nutrition during the COVID-19 pandemic and throughout the ensuing polycrisis. To illustrate some of these policy and programme responses, country experiences have been documented from the Bahamas, Brazil, Cambodia, Colombia, Ethiopia, Ghana, India, Indonesia, Kenya, Liberia, Nigeria, Peru, Rwanda, Sierra Leone and South Africa (Annex B). These examples describe the adaptive, absorptive and, to a limited extent, transformative capacities of the food, health, water and sanitation, education and social protection systems, which enabled these countries to safeguard access to nutritious diets, nutrition-related services, and positive feeding and care practices during the polycrisis.

Drawing from these country experiences, this chapter analyses the resilience capacities of these systems and how they responded to safeguard diets, services and practices, ultimately contributing to more equitable nutrition outcomes for the most vulnerable children, women, families and communities. A synthesis of lessons learned is summarized below and elaborated in this chapter.

- **Lesson 1:** All systems have the potential to be resilient and contribute to safeguarding nutrition during crisis.
- **Lesson 2:** Countries with the flexibility to leverage nutrition interventions across multiple systems were well placed to safeguard nutrition in the context of the polycrisis.
- **Lesson 3:** A focus on reaching the most vulnerable groups, particularly through the social protection system, was an important factor in safeguarding nutrition.
- **Lesson 4**: Expanding and strengthening local capacities and empowering communities were critical strategies for safeguarding nutrition.
- **Lesson 5:** Shared management information systems, innovative technologies, collaborative platforms and swift decision-making were enabling factors that made systems more resilient in safeguarding nutrition.

Lesson 1: All systems have the potential to be resilient and contribute to safeguarding nutrition during crisis

The absorptive and adaptive capacities of food, health, water and sanitation, education and social protection systems varied according to context. Yet, for all five systems, there were country examples of resilience in safeguarding nutrition during the polycrisis.

In Ethiopia and Nigeria, the resilience of the **food system** was enhanced during the COVID-19 pandemic, as governments extended financial support measures, such as short-term, low-interest loans, to micro-, small- and medium-sized enterprises (MSMEs) to maintain food supply chains.[67] This was a critical step in protecting existing access to nutritious diets and food security for vulnerable households, as MSMEs are an essential component of food supply chains, particularly in LMIC. Financial regulations were amended to allow the registration of movable assets (such as production equipment and vehicles) as loan collateral, which increased access to capital for food-producing MSMEs and allowed them to sustain supply, despite pandemic-related constraints.

Government programmes aimed at long-term pandemic recovery in Rwanda and Nigeria also offered technical assistance to food-producing MSMEs to overcome sales disruptions by transitioning sales to e-commerce and registering new e-commerce businesses.

In many countries, key nutrition services delivered through the **health system**, such as vitamin A supplementation (VAS) for children, were disrupted during the COVID-19 pandemic. However, countries delivering VAS to children through routine health services were better able to adapt to the pandemic and maintain VAS coverage than those delivering via campaigns.[68] In Sierra Leone, for example, the VAS programme had already begun transitioning from delivery via campaigns to delivery via routine child health services before the pandemic.[69] Despite the temporary suspension of the programme at the start of the pandemic, Sierra Leone was able to sustain and scale delivery of VAS when routine health services resumed, illustrating the health system's adaptive and absorptive resilience capacities. In fact, coverage of VAS among children 6–59 months increased during the pandemic with outreach support from community health workers, rising from 26 per cent in 2019 to 32 per cent in 2020 and more than doubling to 66 per cent in 2021.[70,71] Qualitative research in Sierra Leone found the programme was perceived as "very resilient to the impact of moderate disruption".[72]

Some countries made efforts to adapt the **water and sanitation** system to safeguard the nutrition of the most vulnerable communities during the polycrisis, including by promoting good hygiene to prevent the spread of respiratory and diarrhoeal diseases that threaten children's health and nutrition. In the Philippines, for example, hygiene kits were provided to recipients of the country's conditional cash transfer programme in barangays (villages) with the highest COVID-19 case numbers, high poverty rates and a dense population of informal settlers.[73] The beneficiaries were carefully selected with the support of local officials to include the most vulnerable community members, such as single parents, women facing violence and persons with disabilities.

As a result of school closures during the COVID-19 pandemic, **education systems** in many countries, including in the Bahamas,[74] Brazil,[75] Cambodia[75] and Kenya[76] pivoted to alternative platforms for delivering school meals to children and their families. By June 2020, three out of four countries that had implemented school feeding programmes and were tracked globally had adopted alternative school meal delivery mechanisms,[75] such as the use of take-home rations, cash-based transfers, and a combination of home food delivery, cash or vouchers.

Social protection systems in many countries demonstrated agility at scale during the pandemic, expanding to reach new vulnerable groups whose livelihoods had been negatively impacted, and increasing support for existing vulnerable groups. In India and South Africa,[75,77] for example, additional social assistance was rapidly expanded to the unemployed, women and children,

which was effective in mitigating some negative impacts of the crisis on nutrition (*see 'Spotlight on India'*).

Lesson 2: Countries with the flexibility to leverage nutrition interventions across multiple systems were well placed to safeguard nutrition in the context of the polycrisis

Countries with the capacity to deliver nutrition programmes and services through multiple systems were able to leverage these complementary modalities to respond to the challenges of the polycrisis and sustain nutrition service delivery for the most vulnerable groups, including children and women. Programme and service delivery across multiple systems was enhanced and facilitated through shared registries, coordinating platforms and other mechanisms for collaboration that had been put in place prior to the polycrisis.

In **Ghana,** the integrated delivery of iron-folate (IFA) supplementation for adolescent girls through both the education and health systems ensured that IFA delivery continued when schools closed during the COVID-19 pandemic.[78] Prior to the pandemic, the Girls' Iron-Folate Tablet Supplementation Programme was a coordinated effort between the education system (via schools) and the health system (via health facilities) to reach girls both in and out of school. When schools closed, Ghana shifted delivery for all girls completely over to the health system, leveraging the support of community health workers to deliver IFA through stationary and mobile sites, and integrating IFA delivery into the dry-food ration distribution programme to reach vulnerable girls. While only about 300,000 adolescent girls were receiving IFA supplementation in mid-2020, by the end of 2021, the shift to the health delivery platforms enabled the programme to reach nearly all eligible adolescent girls – more than 2.5 million – with IFA tablets through health facilities across the country.[78,79]

Before the pandemic, the Government of **India** had established a series of programmes to protect and promote food security and nutrition for the most vulnerable, with delivery through food, health, water and sanitation, education and social protection systems. These multiple entry points for reaching those most in need helped India respond to the polycrisis in a deliberate, rapid and flexible manner, including by adapting the delivery of essential health services to the community, transitioning school meals to take-home rations, and expanding social protection programmes (*See 'Spotlight on India'*).

In **Peru**, the collaboration between stakeholders across the food, social protection and health systems prior to the pandemic set the stage for expanding provision of fortified rice as part of the national social protection programme (i.e., social transfers delivered through school meals and in-kind food transfers) throughout the polycrisis.[80] The programme was important in fostering a longer-term commitment to addressing chronic micronutrient deficiencies in the country.

Lesson 3: A focus on reaching the most vulnerable groups, particularly through the social protection system, was an important factor in safeguarding nutrition

Safeguarding nutrition during the polycrisis required a sustained focus on expanding protection and assistance to those who were most vulnerable or who were becoming vulnerable as a result of the polycrisis. In most cases, these groups included women, the unemployed, the informally employed, those whose livelihoods were threatened, and groups typically excluded, such as migrants. This protection or assistance included income or food support to allow families to meet basic needs and afford nutritious foods. Countries such as **Brazil, Cambodia, Colombia, India, Kenya and South Africa** rapidly scaled up social protection programmes, providing cash, food or both, and many increased the size of the transfer or expanded their programmes to reach new vulnerable groups.

In some contexts, the polycrisis even created an opportunity for governments to redress and correct policies and programmes that had previously excluded some marginalized groups. In these cases, the social protection system was not only adaptive and absorptive but also transformative. In **Colombia**, for example, the Government expanded the eligibility of an existing social protection programme to reach new and under-served populations, including migrants, many of whom were experiencing food and nutrition insecurity as the result of pandemic-related movement restrictions.[81-83] Food insecurity was especially apparent among women: almost twice as many migrant women than men reported spending at least one full day without eating in the previous month (21 per cent versus 12 per cent).[84] Consequently, the Government eased the eligibility requirements for the existing social protection registry to include migrants, access to the formal labour market was extended with new two-year work permits, and migrants were granted access to essential services.

In **Ethiopia,** options were made available for MSMEs to access soft loans (i.e., loans at a reduced interest rate) to cover three months of operational costs (such as utilities and rent) and access was extended to informal and unregistered businesses (which are often owned by women) to address gender disparities and ensure access for women without other means of acquiring capital. To

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support women in **South Africa**, the Government revised the eligibility criteria for its Child Support Grant from an approach targeting households to an approach targeting caregiver.[77] This change ensured that more than 7 million more people, nearly all of them women, received a child support of ZAR 500 a month for a period of five months (totalling about US$150).

School meal programmes are an important category of social protection programmes delivered through the education system. These programmes faced immense challenges during the pandemic with the closure of schools around the world; however, many pivoted to using alternative delivery platforms.

- In the **Bahamas**, the school meals programme aligned with social protection services such that the families of schoolchildren received monetary support or vouchers to purchase food.[74] The budget for school feeding increased during the pandemic and the programme reached more students.

- In **Brazil**, the Government delivered food kits directly to the families of students and expanded the reach of the Bolsa Familia social welfare programme by 1 million families during the pandemic.[75]

- In **Cambodia**, the Ministry of Education, Youth and Sport distributed food stocks from development partner warehouses as take-home rations to more than 100,000 households with primary school children.[75]

- In **Kenya**, the national school meals programme increased the number of students served during the pandemic, albeit with meals provided less frequently and with a reduced ration size.[76] The programme shifted from targeting not only students but their families as well, with a dry take-home ration. In addition, a fortified corn soy blend was introduced for children enrolled in grades 1, 2 and 3.

Globally, as schools reopened after restrictive measures were lifted, government support for school meals continued in many countries. In 2023, an estimated 418 million children worldwide were receiving school meals, an increase of 30 million prior to the polycrisis in early 2020. Most of these programmes are domestically funded.[85]

Lesson 4: Expanding and strengthening local capacities and empowering communities were critical strategies for safeguarding nutrition during the polycrisis

Communities, local actors and networks played a critical role in safeguarding nutrition throughout the polycrisis. Many countries, such as **Ghana**, **India**, **Indonesia**, **Liberia** and **Sierra Leone**, made deliberate efforts to strengthen the local capacities of the different systems delivering nutrition – especially the health and food systems. This included engaging, empowering and supporting community workers and ensuring that networks and platforms were able to function effectively at a local level.

In **Ghana**, investments in engaging communities enabled the Government to shift from school-based delivery of IFA supplements to health systems delivery in response to pandemic-related school closures. Community-based communication channels (radio, community-based faith groups, parent-teacher groups) were leveraged to raise awareness about IFA supplementation among influential community members and engage their support in encouraging girls to visit health facilities for IFA.[78]

Community health and nutrition workers were critical to the resilience of the health system during the polycrisis and helped ensure the continuation of essential services necessary for good nutrition during health facility disruptions. In **Indonesia,** the health system adapted its programme for the early detection of acute malnutrition to a family-centred approach in response to the COVID-19 pandemic.[86] Community health workers trained caregivers to detect acute malnutrition in children at home using colour-coded measuring tapes to assess arm circumference (an approach known as family-led screening). Measurement by caregivers was highly accurate. This approach enhanced the capacity to screen and detect malnutrition and led to greater community ownership and empowerment by caregivers.[86,87] In fact, globally, 32 countries had adopted family-led screening by 2022, with more than 2.1 million caregivers trained in this approach.[88]

In **Liberia,** the lessons learned from the Ebola epidemic in 2014–2016 – namely, the importance of strengthening and leveraging local capacities – were applied to help minimize disruptions to the delivery of essential services.[89] The Ebola experience showed that health workers who were embedded in their communities – such as traditional birth attendants, community leaders and traditional healers – were highly effective in overcoming mistrust and better placed to reach communities in need, compared with outside workforces. Building on this experience, Liberia rapidly trained and equipped community health workers to deliver essential services necessary for good nutrition during the COVID-19 pandemic. Investments in bolstering existing community platforms to raise awareness about positive nutrition and care practices led to increased community ownership, higher acceptance, and improved demand for nutrition services, independent of the delivery system.

In some countries, government support to local food producers helped strengthen the resilience of the food system at the community level. MSMEs were particularly vulnerable to disruptions caused by the pandemic, which resulted in lower sales, reduced access to supplies and limited financial reserves.[90] Moreover, women-owned enterprises faced additional gender inequality barriers, such as unequal access to financial resources and operational resources (seeds, mechanical equipment). However, efforts to invest in strengthening the capacities of local small food-producing businesses in **Ethiopia**, **Nigeria** and **Rwanda** had a positive impact on protecting local food supplies at the community level.[67]

Lesson 5: Shared management information systems, innovative technologies, collaborative platforms and swift decision-making were enabling factors that made systems more resilient in safeguarding nutrition

Swift decision-making combined with government leadership to collaborate across sectors, allocate budgets or trigger disaster response financing mechanisms at the central and subnational levels were critical to the expansion and hence the resilience of the systems delivering nutrition interventions. In addition, many governments effectively leveraged innovative technologies to expand their existing database of social protection programme beneficiaries to rapidly reach additional vulnerable groups.

In **South Africa**, when in-person applications for social protection were paused during pandemic lockdowns, the application process was digitized to manage the massive influx of applicants and expand the number of people whose livelihoods or incomes were affected by the COVID-19 pandemic.[77] The Government used mobile technology to implement "top-up" payments quickly and effectively for households already receiving cash payments. Eligibility for social protection was also extended to include newly unemployed people. The Government leveraged technology to coordinate the social protection database with other systems, which streamlined the application process and reduced barriers to eligibility. At its peak, the programme was reaching 32 million people, in a country with a population of nearly 60 million.

New technologies were also leveraged to adapt systems to ensure the continuity of health and nutrition services during the pandemic. In **Indonesia**, community volunteers used mobile phones to conduct trainings for caregivers on how to screen their children for acute malnutrition.[86] In the **Bahamas**, the Government digitized the application process for its school feeding programme and developed an up-to-date database of eligible students and parents.[74]

Broad stakeholder collaboration, collaborative platforms and a long-standing commitment to address micronutrient deficiencies were critical to supporting the resilience of the social protection system in **Peru.**[80] These enabling factors helped drive the rapid scale-up of fortified rice production and distribution to meet the growing demand for social assistance during the polycrisis.

SPOTLIGHT ON INDIA

Transformative efforts across multiple systems to safeguard nutrition outcomes in the context of the polycrisis

India's response to the polycrisis was deliberate, rapid and flexible, mobilizing its extensive national social protection system as well as other systems to safeguard access to nutritious diets, essential services and positive nutrition and care practices. The response built on existing policies, programmes, and legislative measures that place nutrition and food security at the centre of the country's rights-based and inclusive development agenda. The Government's unprecedented efforts helped improve food security for the most vulnerable.

Adaptive measures were taken to sustain the delivery of essential services: When Anganwadi (community childcare) centres closed during the COVID-19 pandemic, community-based Anganwadi workers continued to provide services, such as supplementary food rations, micronutrient supplements (IFA and vitamin A), growth monitoring and promotion, and counselling through home visits.[91] Many of the nutrition rehabilitation centres for the management of children with severe acute malnutrition continued to function via outpatient services. When schools closed nationwide, the school meals programme pivoted to provide take-home rations for children,[92] and school-based nutrition services were instead provided through the health system's community-based programmes. For example, the Ministry of Education issued guidance requesting all states to provide either hot meals or a Food Security Allowance comprised of food grains, pulses, oil to all eligible children, while community-based workers provided IFA supplementation to adolescent girls during home visits to mitigate disruptions to school-based health and nutrition programmes.

Existing delivery platforms were expanded with budget support: Existing national social assistance programmes (which already had extensive reach) expanded their food and cash distribution rapidly following the allocation of new Government funding.[93-96] National social protection programmes shared databases to expand support to the poorest and most vulnerable. Many Indian States initiated additional social assistance packages, leveraging their existing delivery systems, to enhance the impact and reach of these social assistance programmes.[97-99]

Existing and newly emerging vulnerable groups were supported: Migrant labourers were included within the food ration programme and other expanded social protection programmes.[95] Additionally, the Reserve Bank of India offered loans specifically for women through self-help groups in rural regions and credit lines with up to ten-year repayment options.[67]


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Technology drove innovation: Mobile apps were used to register for social assistance programmes and access payments.[100] A mobile monitoring system also provided information on eligibility for support and facilitated decision-making.

Market-driven innovations helped rebuild a disrupted food system: Government triggered several initiatives to protect the food system, ranging from large-scale procurement of farm produce (e.g., wheat, milk, fruits, vegetables), to employment guarantees, cash transfers for farmers and adjusted loan repayment schedules. In addition, the private sector played a key role in adapting the food system in response to the polycrisis, including through public-private partnerships and market-driven innovations (e.g., improved use of technology to better match supply with demand).

No single system is likely to be sufficiently resilient on its own to fully mitigate the impact on food and nutrition security in the context of a polycrisis. This rich collection of country experiences demonstrates the importance of leveraging multiple systems – food, health, water and sanitation, education and social protection systems – and enabling them to be more resilient in safeguarding access to nutritious diets, essential services and support positive feeding and care practices during a polycrisis.

The country experiences shared in this chapter demonstrate that building resilient systems that can deliver for nutrition requires focusing on the most vulnerable groups via social protection systems, food system actions (such food fortification), strengthening local capacities and empowering communities, and leveraging enabling factors such as collaborative platforms and shared information management systems and technologies. As countries continue to face crises that threaten the nutrition of the most vulnerable, putting these learnings into practice to build more resilient systems has never been more urgent.

CHAPTER 4

REFLECTIONS AND RECOMMENDATIONS FOR THE WAY FORWARD

Over the last five years, many countries have experienced a devastating time of polycrisis – caused by the combined effects of the COVID-19 pandemic, the rising occurrence of climate and economic crises, and new and protracted conflicts that have deepened food and nutrition security – with relatively greater consequences for women and children, especially the youngest, the poorest and the most marginalized. The polycrisis reminds us that recent development gains in child survival, growth and development can be quickly threatened or reversed without efforts to strengthen the resilience of the multiple systems that are accountable for protecting maternal and child nutrition. While the impact and long-term fall-out of the polycrisis are already extraordinary, it also reveals how governments and their partners have adapted to maintain the continuity of key services and programmes needed to safeguard nutrition.

This report's objective was to describe the impact of the polycrisis on nutrition outcomes, access to nutritious diets, essential services necessary for good nutrition, and positive feeding and care practices, based on a synthesis of existing and available evidence as well as an analysis of how key systems – food, health, education, water and sanitation, and social protection – responded during this period. Despite the limited availability and comparability of data, there are indications that acute malnutrition rose significantly among women and

children in the countries most affected by the food and nutrition crisis and that the polycrisis had a detrimental impact on food and nutrition security due to reduced access to nutritious diets and disruption of access to essential services, particularly in low-and middle-income countries.

Drawing on country experiences, we assessed the resilience of systems in terms of their absorptive, adaptive and transformative capacities, which were critical to safeguarding nutrition in the countries and contexts affected by the polycrisis. The report finds that despite the immense challenges and disruptions, many countries demonstrated the capacity of their systems to adapt, absorb, and transform in response to the crisis, and in doing so, were able to blunt its effects.

We captured how some governments strengthened and adapted food, health, water and sanitation, education and social protection systems to maintain and even expand critical services to protect nutrition among the most vulnerable groups. Countries that were already leveraging multiple systems to deliver critical nutrition services were better equipped to adapt their response to the polycrisis and maintain and scale up services. We also described how leveraging community-based actions allowed countries to build trust, tackle misconceptions and bring services closer to where vulnerable women, children and their families live. Moreover, the analysis of country experiences highlighted how the use of innovative digital technologies and strong coordination platforms made systems more adaptable in the face of crisis. More details are available in Annex B.

Some countries are still recovering from the persistent fall-out of the polycrisis, and many will continue to face new and emerging shocks - caused by an accelerating climate crisis, inflated food prices, new public health pandemics and conflict. These crises may be cyclical and are likely to become a more frequent and enduring reality. As such, there is a growing need for countries to adopt policies and programmes that enable the resilience of multiple systems to protect nutrition outcomes and build a more equitable future for the most vulnerable, including women and children.

Drawing from the examples of resilience we observed during this polycrisis, we offer some recommendations for policy and programme actions to strengthen and leverage systems to protect nutrition outcomes before, during and after a crisis.

RECOMMENDED POLICY AND PROGRAMME ACTIONS

While challenging in low-resource settings, particularly for fragile states, governments must take the lead in strengthening the resilience of key systems that deliver for nutrition, before, during and after crises, to protect nutrition outcomes, especially for vulnerable women and children. To strengthen the nutrition resilience of systems, governments and their partners should aim for the following recommended policy and programme actions:

1 Put in place policies and programmes that enable all systems to be adaptive, absorptive and transformative in the face of future shocks and crises. The polycrisis has shown that countries need to have appropriate policies in place and be operationally ready to respond to crises with plans that support systems strengthening and better coordination with other sectors. This includes developing risk-informed country-led plans, policies and actions that consider the system level changes needed to prepare for future shocks, informed by the lessons learned during the polycrisis. While challenging, particularly for fragile states, countries facing frequent crises need to work towards important long-term transformative changes in systems, addressing fundamental inequities, while being ready for real-time adaptive responses to crisis. The lessons learned from this report should guide the development of new or updated policies and strategies across all systems that support nutrition to create synergies between systems, ensuring strong governance and swift decision-making in response to crisis.

2 Increase the resilience capacity of key systems – especially the food, health, education, water and sanitation, and social protection systems – to maximize the prevention of malnutrition in countries most vulnerable to polycrisis. This includes:

- **Transforming food systems so that they can continue to provide and promote nutritious, safe, affordable, and healthy diets, including in times of crisis.** Actions may include ensuring the consistent and sustained availability, access, and promotion of nutritious foods, including fortified foods, food supplements and therapeutic foods for children and women. Support is also needed for food policies and programmes that facilitate maternal and child access to - and demand for - nutritious foods. This includes financial incentives and subsidies to food system actors, such as producers, processors and retailers, with a focus on MSME, improved availability and promotion of nutritious foods in and around schools, and policies that protect children from harmful food marketing practices.

- **Reinforcing the capacity of the health system to protect, promote and support optimal infant and young child feeding and caregiving practices and healthy diets and lifestyles among children, adolescents and women of reproductive age. Services and practices that prevent and treat malnutrition also need to be strengthened and coverage needs to be boosted**. Actions may include strengthening the design and implementation of policies, strategies, and programmes to improve coverage and accessibility, including strengthening mobile and community-based outreach capacities.
- **Strengthening (or establishing) school nutrition programmes** that provide healthy school meals and snacks, including supportive behaviour change communication and interventions to prohibit the sale and advertisement of ultra-processed foods in and around schools. During a crisis, schools should prioritize providing school meals through alternative delivery platforms, if schools must be closed.
- **Leveraging social protection policies and programmes to reach the most vulnerable, especially poor households with women and children, to offset the inequities that are often exacerbated by crises.** Actions should be put into place to expand the coverage of the social protection system to reach the nutritionally vulnerable, while fostering intentional synergies with nutrition programmes to improve access to nutritious foods (e.g. fortified staples), delivery of essential services and positive feeding and care practices. Efforts should be made to reshape the existing social protection system to promote gender equality and foster links with the food and health systems to achieve sustained change.

3 Strengthen the predictability and flexibility of funding, also for crisis situations, to enable the building of stronger and more resilient systems. Global efforts to mobilize resources to build stronger and more resilient systems that have the flexibility to respond, including during times of crises, are important in working towards sustainable solutions and protecting those most at risk. This requires continued investments in strengthening the absorptive, adaptive, and transformative capabilities of national systems to enable them to support people and their communities, ensuring a continuum of services, as they transition in and out of crisis. Such investments may both maximize the impact of the response and improve resource efficiency.

4 Strengthen the capacity, engagement and empowerment of communities as participants and contributors to the nutrition resilience of systems. Country experiences with the Ebola crisis, the COVID-19 pandemic, and conflicts, show the importance of community leadership and accountability in fostering resilient systems that continue to contribute to nutrition outcomes in the face of shocks and crisis. Countries should strengthen links with existing community leaders and networks and engage them to expand the reach of services and enhance impact and trust within local communities. This improves community ownership and encourages communities to demand stronger, more resilient systems that are able to deliver for nutrition.

5 Strengthen data collection and build robust information systems to better target vulnerable households before, during and after crisis and to measure changes in access to nutritious foods, essential services and positive practices before and after shocks. The lack of timely global and regional data to assess the impact of the polycrisis on dietary diversity, nutrition-related outcomes, and the effectiveness of responses to it, points to the need for more timely, real-time data collection, including via early warning systems. These systems are critical to facilitate policy and programme planning, targeting, communication, management and continued access to services during crises. Innovations can be leveraged, such as rapid surveys using mobile technologies focused on hotspot areas to diet- or disease- related indicators, which are more sensitive to rapid changes in food and nutrition security than anthropometry.

Amid the devastating effects of the polycrisis – which has disproportionately impacted the most vulnerable and left the world grappling to recover – there are important stories of resilience. Many countries have demonstrated the capacity of their systems to absorb, adapt and (to a lesser extent) transform in response to shocks in ways that have safeguarded access to nutritious diets, essential services necessary for good nutrition, and positive care practices for the most vulnerable families. These achievements did not happen by accident; they were the result of purposeful investments in strengthening the programmes, policies, and synergies of and between multiple systems to make them better equipped and more accountable for nutrition results. In reflecting on and learning from these experiences, governments and their partners can seize this opportunity to build more sustainable systems and a healthy and equitable future for children, women and their families and communities everywhere.

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ANNEX A
METHODOLOGY

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From mid-2021 to mid-2023, the Standing Together for Nutrition Consortium (ST4N) conducted a strategic review of emerging empirical data on the polycrisis and its impact on key systems – the food, health, education, water and sanitation, education and social protections systems – as well as on food and nutrition security and nutrition outcomes. Criteria for inclusion included peer-reviewed evidence or global and regional evidence collected and analysed by established organizations. Peer-reviewed and published research was obtained through online journal portals.

Emerging evidence was also sought from ST4N Consortium members and partners, and United Nations agencies and their partners. Reports used included annual reports, such as Joint Child Malnutrition Estimates through 2023, the Global Report on Food Crises through 2023, and the State of Food Security and Nutrition in the World through 2023, as well as flagship reports of UNICEF, the World Food Programme (WFP), UN Women, the World Bank, and the International Food Policy Research Institute (IFPRI).

Data were extracted and synthesized from the research papers and reports following the UNICEF Conceptual Framework on Maternal and Child Nutrition. The data extracted were primarily empirical, or data that used minimal modelling to complete the analysis. Disaggregations for low- and middle-income countries, gender, or other vulnerable groups were extracted where possible. Data sources, key data extracted, and the data synthesis were reviewed and agreed to by ST4N's Global Report Working Group.

Country experiences were identified from United Nations agencies and their partners to illustrate examples of the resilience capacities of the systems that support nutrition. A 'nutrition resilience framework' was used to analyse system resilience capacities in the country examples and draw policy lessons.

Limitations are primarily related to data availability, which was an issue even prior to 2020 due to resource constraints, capacity gaps, and access issues, which were further constrained during the COVID pandemic. This report mainly covers the period of 2020–2022, when food, health, education, water and sanitation, education and social protection systems were affected by global, regional, and national shocks and subsequent crises; therefore, data collection was further affected by the efforts to mitigate the impact of the pandemic and other shocks. There is limited disaggregation of data by country income level, gender, or vulnerable populations. Additionally, nutrition outcome data are limited to wasting and women's nutritional status, and food security data are primarily food indicators such as availability, affordability, and diet quality, because representative global or multi-country population-level data for other nutrition indicators that allow for pre- versus during and/or post-crisis comparison were not available.

ANNEX B
COUNTRY CASE STUDIES

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COUNTRY CASE STUDIES

Contents

HEALTH SYSTEM

1. Vitamin A supplementation in Sierra Leone

In settings where vitamin A deficiency is a public health issue, WHO guidelines recommend supplementation for children aged 6–59 months to reduce child morbidity and mortality. Vitamin A supplementation (VAS) relies on two main approaches: delivery as part of routine health services at facilities or in the community; or delivery through mass campaigns (e.g., fixed-site events, door-to-door).

In April 2020, the Global Alliance for Vitamin A (GAVA) recommended the temporary suspension of mass campaigns as part of actions to mitigate the COVID-19 pandemic. Many countries suspended campaign activities, which led to a significant decline in VAS uptake globally. A UNICEF analysis of administrative data showed that 62 million fewer children received the necessary two doses of VAS in 2020 than in 2019.[1] Due to concerns about the decline in VAS uptake, GAVA revised its guidance in June 2020 and recommended that "the delivery of VAS through mass campaigns may be considered based on a risk-benefit analysis" recognizing that a safe, flexible, country-guided approach for either fixed-site or household delivery was needed to improve VAS uptake.

Adaptative and absorptive capacities: Flexible delivery platforms facilitated maintenance of essential VAS

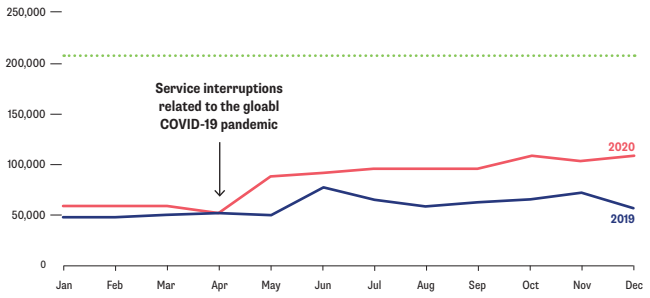
Prior to the pandemic, Sierra Leone had already begun adapting VAS delivery from mass campaigns into routine health services to make supplementation a regular part of children's health and nutrition care.[2] From 2017 to 2021, Sierra Leone's VAS programme was absorbed into the integrated reproductive and child health platform, which also included a strong community health worker component for outreach. In the areas where this health-based platform was implemented, VAS coverage had passed its performance threshold of 80 per cent by 2018.

During the pandemic, despite the temporary suspension of the programme following the initial GAVA recommendation, Sierra Leone was able to sustain and improve VAS delivery when its integration into routine health services resumed and continued to scale nationally (Figure 1). Coverage of VAS among children aged 6–59 months increased during the pandemic, rising from 26 per cent in 2019 to 32 per cent in 2020 and more than doubling to 66 per cent in 2021.[1,3]

Qualitative research in Sierra Leone found that the programme was perceived as "very resilient to the impact of moderate disruption."[4]

The importance of integrating VAS within routine health systems to ensure sustainability has also been demonstrated in other countries. Countries that were already delivering VAS via routine health systems contacts before the pandemic were able to maintain and even increase VAS coverage for children. For example, Kenya, Madagascar, Mali and Papua New Guinea increased VAS coverage by more than 10 percentage points using routine delivery.[5]

Figure 1. Coverage of two-dose vitamin A supplementation in Sierra Leone doubled during the pandemic, from January 2019 to December 2020



Number of children 6–59 months of age in Sierra Leone who received two doses of vitamin A in the previous 12 months, 2019–2020 (DHIS2, 2019–2021).[4]

→ Policy lessons learned

The integration of VAS into Sierra Leone's routine health services, such as antenatal care and immunization services, was a highly effective way to ensure that the delivery and uptake of VAS continued when mass campaigns were not safe or practical. Further adaptations, such as using community health workers to deliver VAS when health facilities were not accessible, helped maintain delivery of the routine VAS programme. In these ways, the health system demonstrated both absorptive and adaptive capacities to enable services to continue. This case study illustrates how decision-makers can balance the risks associated with disruptions from a shock with the comparative benefits of alternative or complementary delivery approaches.

2. A family-centred approach to screening for child wasting in Indonesia

Indonesia has a persistently high burden of child wasting, the most life-threatening form of malnutrition. In 2018, an estimated 10.2 per cent of children under 5 years of age were suffering from wasting and 3.5 per cent were suffering from severe wasting; this corresponds to nearly 2 million children affected by this life-threatening condition.[6,7] In response, Indonesia set out to expand both the early detection and treatment of child wasting. Indonesia had already launched a community-based screening programme in 2015 where children were regularly screened for wasting using MUAC measurement by community health workers at local health posts. In 2019, the Government of Indonesia renewed its commitment to the integrated management of acute malnutrition (IMAM), which included outpatient treatment for children with severe wasting without complications.

Adaptive capacity: Screening shifted from a community health volunteer-based approach to a family-centred approach

During the COVID-19 pandemic, the Government of Indonesia put in place strict protocols for health facilities to curb the spread of the virus. These restrictions resulted in community health workers being unable to conduct MUAC screenings. Concurrently, the wider impact of the pandemic led to greater food and nutrition insecurity in these same communities, putting more children at risk of wasting. To ensure children with wasting could be detected and referred, screening was shifted to a family-centred screening approach, which entailed training parents and caregivers to use MUAC.[8] The programme employed a 'train-the-trainer' model; the primary health centres provided orientation to the community health workers, as well as instructional and communication materials, such as leaflets explaining the colour-coded MUAC tapes, which community health workers used to train caregivers. Community health workers conducted the caregiver training in person or via phone, depending on the number of local COVID-19 cases and the caregivers' access to mobile technology.

In March 2020, the family-led MUAC approach was modelled in two districts in the East Nusa Tenggara (NTT) Province in southern Indonesia and has since been expanded to 48 districts across seven provinces (Aceh, Central Java, East Java, South Sulawesi, West Nusa Tenggara, East Nusa Tenggara and Papua Provinces). The MUAC measurements taken by caregivers during the modelling period proved to be highly accurate.

A relatively higher percentage of children with moderate and severe wasting were accurately identified. For example, 100 per cent of the children identified as severely wasted by caregivers had their diagnosis confirmed, versus 82 per cent of the cases identified by community health workers. These accurate measurements by caregivers occurred despite relatively limited training and supervision due to the constraints imposed by the pandemic.

Evidence demonstrated that this shift in approach increased local capacity and ownership, while improving the accuracy of screening for child wasting. Children identified with wasting through the screening were able to receive treatment through expanded outpatient facilities linked to IMAM. As of June 2023, IMAM services have expanded to 120 districts, including community and family-led screening.

→ Policy lessons learned

Shifting screening from community health workers to family caregivers allowed the continuation of early detection of wasting during a period of increased risk. This family-centred approach demonstrated a viable alternative to continuing early detection programmes for wasting in the context of disruptive shocks. Additionally, this adaptation of the system led to greater engagement of parents and caregivers in the ongoing monitoring of their children's nutritional status.[8,9] Besides increasing local screening and treatment capacity and empowering caregivers in this study, results of other evaluations of family MUAC during the pandemic in other countries in East Asia and the Pacific showed that the change in design likewise led caregivers to report increased feelings of ownership and empowerment.[10]

During the pandemic, the shift to family MUAC was made in many low- and middle-income countries:[11] In fact globally, 32 countries had adopted family-led screening by 2022, with more than 2.1 million caregivers trained in this approach.[12]

3. Sustaining adolescent iron and folic acid supplementation during the COVID-19 pandemic in Ghana

Anaemia has been a persistent public health problem in Ghana among children, adolescent girls and women. In a 2014 survey, four out of 10 women, and seven out of 10 children under 5 years of age were affected.[13] Further, almost 5 out of 10 adolescents aged 15–19 years are anaemic. Iron-folic Acid (IFA) supplementation is considered a cost-effective intervention for addressing anaemia.[14] The use of IFA supplementation during adolescence and through adulthood is recommended by WHO to benefit girls' iron status and decrease their risk of developing anaemia.

The Girls' Iron-Folic acid Tablet Supplementation (GIFTS) Programme is a national public health intervention designed to provide adolescent girls, in and out of school, with weekly IFA tablets as well as education, to help prevent anaemia. The delivery mechanism reaches girls through the education system (schools) and health systems (health facilities). Prior to the pandemic, the GIFTS programme aimed to scale up coverage countrywide, from an initial four regions to all 16, for a total reach of 3 million girls.[15,16] Programme implementation was strengthened through monitoring and supportive supervision and an administrative coordinator supported already overburdened teachers in tracking supplies. Additionally, community-level sensitization and engagement with Parent Teacher Associations, caregivers and traditional and religious leaders addressed myths and misconceptions about IFA that helped improve uptake and coverage.

An evaluation of the programme prior to the COVID-19 pandemic (2018) showed a 26 per cent reduction in anaemia and improved adolescent knowledge on iron-rich foods and dietary practices among adolescent girls in schools.[17] The evidence generated through the evaluation supported the Government's decision to scale up and sustain the programme countrywide. The strong collaboration between the Ghana Health Service and the Ghana Education Service appears to have been a driving force for the successful implementation of the programme.

Adaptative capacity: Pivoted the delivery of IFA from the education system to the health system

Pandemic-related school closures caused significant disruptions to the GIFTS programme. In response, Ghana adapted the delivery of IFA supplementation to the health system.[16]

Firstly, this entailed creating awareness and mobilizing schoolgirls at home to continue to obtain the IFA supplements every month at health facilities. This was encouraged by leveraging the support of community-based communication channels, such as community information centres, community radios, men's and women's groups in the communities, faith-based groups, and by engaging with key community stakeholders (chiefs, opinion leaders and Assembly persons) as well as health workers.

Secondly, community health worker teams distributed IFA supplements to eligible adolescent girls through stationary and mobile sites, including in marketplaces, public community places and directly to households.

Thirdly, IFA supplementation was integrated into existing programmes, including the annual Child Health Promotion Week celebration in May 2020. GIFTS was also integrated into a dry-food ration distribution programme that was established for vulnerable adolescent girls.

Fourthly, accountability for IFA supplementation was strengthened when the Government took the opportunity to integrate programme indicators into the DHIS2, enabling monthly tracking and reporting on out-of-school adolescent girls' IFA supplementation.

Throughout the pivot to the health system for delivery, the Government's Nutrition Department monitored the programme and shared regular progress updates with Health and Education colleagues to facilitate coordination. Despite the school closures, IFA coverage continued to scale up so that by 2022, the GIFT programme was delivered nationwide. Whereas by mid-2020, over 300,000 out-of-school adolescent girls received IFA supplementation,[16] by the end of 2021, the goal of reaching all eligible girls nationwide was attained, with more than 2.5 million girls receiving IFA tablets through health facilities across the country.[15] Post-pandemic, IFA delivery returned to both health facility and school platforms.

→ Policy lessons learned

The IFA supplementation programme successfully adapted to the crisis by pivoting delivery of the supplements from the education system to the health system. The adaptation was facilitated by a number of pre-existing factors, including political will and strong government ownership. The existing collaboration and leadership between the Ministries of Health and Education to reach out-of-school girls facilitated the capacity of the education system to scale up delivery through the health

system. Furthermore, investment in social mobilization, using existing community platforms, led to community ownership, high acceptance and demand for the service, independent of delivery system.

Finally, strengthened monitoring capacities of the service providers (both in schools and at the health facilities) facilitated collaboration and generated solid evidence of increased coverage. These factors contributed to a broader reach of this essential service through the coordinated systems than when delivery was provided solely through the education system.

4. Strengthening community resources and trust to increase health system coordination in Liberia

Liberia's experience with Ebola between 2014 and 2016 played a significant role in shaping its response to the COVID-19 pandemic.[18] The devastating effects of Ebola provided impetus for important changes in the country's capacity to deal with a crisis, resulting in a strengthened health system and better preparedness and response capabilities during the COVID-19 pandemic.

The Ebola outbreak severely disrupted the ability of Liberia's health system to deliver services. Staff at health facilities frequently refused to work, in large part, because of the significantly higher risk of being infected. Patients also stopped visiting the facilities because they were afraid of getting infected. The decline in the coverage of vital maternal and child health interventions was particularly dramatic, and overall, community confidence in the health system was undermined.

Lessons from the Ebola outbreak: Strengthening health system absorption and adaptation capacities

A key lesson from the Ebola outbreak was that health workers who were embedded in their communities – as opposed to outsiders – were highly effective in addressing issues of mistrust and stigma attached to the disease. Traditional birth attendants, community leaders and traditional healers also played important roles, despite a lack of formal engagement or support.

Liberia also recognized the importance of engaging communities in surveillance activities to improve early detection, reporting and containment efforts.

Community-based surveillance helped build trust and mobilize communities to actively participate in the response. This included engaging community leaders, religious leaders and influential individuals to ensure effective communication and collaboration. Also, involving community members in surveillance activities fostered a sense of ownership, ensuring that the response efforts were community-driven and tailored to local needs.

Absorptive and adaptive capacities: Coordinating with community-based care to sustain essential health and nutrition services

Earlier learning from the Ebola epidemic had resulted in Liberia strengthening its community engagement and community-based surveillance systems. Consequently, Liberia was better placed to pivot to a strong community response during the COVID-19 pandemic as these experiences were used to effectively leverage existing community networks and partnerships to engage with communities. This approach helped maintain trust in the health system, provided timely information about protective measures, addressed misperceptions about COVID-19, created social stability in vulnerable communities and strengthened community-based surveillance.

In addition, community health workers were quickly trained and equipped to respond at the community level, making linkages with nearby health facilities. Building on lessons from the 'no-touch' policy used during the Ebola outbreak, protocols were adapted during the COVID-19 pandemic to keep community health workers safe as they provided various services in the community. Their work was effective because they were known and trusted by community members, enabling them to communicate appropriate messages and implement needed activities.

→ Policy lessons learned

Although the health system faced important challenges, including limited testing capacity, resource constraints and socioeconomic impacts, the learning from the Ebola outbreak enabled the health system to demonstrate both absorptive and adaptive capacities that helped minimize disruptions to the delivery of routine services and pandemic health system services. Specifically, the Government of Liberia recognized the importance of investing in community resources to strengthen the resilience capacities of the health system to maintain essential services during a crisis. Establishing effective channels of communication, addressing community concerns and involving community leaders helped foster trust, cooperation and compliance during the pandemic.

Fostering community engagement in decision-making and training community health workers enabled the health system services to pivot from facility-based delivery to community-based delivery.

FOOD SYSTEM

5. Strengthening the capacities of the food system through support to smaller enterprises in food supply chains in low- and middle-income countries

In most low- and middle-income countries, micro-, small-, and medium-sized enterprises (MSMEs) are an essential component of food supply chains. MSMEs are part of an often-fragmented network of producers, processors, aggregators, distributors and retailers that collectively manage the flow of nutritious foods from 'farm to plate', which is particularly relevant for low-income households.

In sub-Saharan Africa, very small farms (≤2 hectares) produce about 30 per cent of most food commodities, and small farms (≤20 hectares) produce more than 75 per cent.[19] In addition, MSMEs process, trade and deliver 85 per cent of the food in the regional food supply chain, making their smooth functioning essential to households in sub-Saharan Africa.[20,21]

Pandemic disruptions significantly impacted the vital role of MSMEs in food supply chains and food security

MSMEs operating within food supply chains are particularly vulnerable to disruptions caused by crises. Despite their critical role in supplying affordable, nutritious food, many components of the supply chain were classified as non-essential during the pandemic, including banking, storage facilities and supply chains for packaging, fuel, fertilizers and veterinary medicines. Retail fresh food or 'wet' markets and wholesale markets were also often locked down, and transportation by bus or truck was limited.

Data from 367 agri-food MSMEs in 17 countries found that 94 per cent of respondents reported their operations had been negatively affected by the pandemic, leading to lower sales, reduced access to supplies and limited financial reserves.[22] Smaller firms were especially vulnerable due to their lack of financial buffers.

Even prior to COVID-19 pandemic, MSMEs in low- and middle-income countries faced multiple challenges that limited their ability to produce affordable nutritious foods predictably and at scale due to limited financing, lack of knowledge and technical support to improve food safety and quality, and limited distribution networks. These challenges were particularly limiting for smaller firms and for those operating in the informal economy.

Women-owned and operated enterprises encountered these same challenges, which were further compounded by gender-specific barriers. For example, women farmers often lacked equal access to inputs that would have improved their agricultural practices and outputs, such as seeds, mechanical equipment and extension services. This inequality was compounded by unequal access to the necessary credit.

Adaptive and transformative capacity: Increased access to financial and technical support for MSMEs as critical elements of the food system

To keep food systems functioning during the pandemic, policy measures were implemented that included financial support to address immediate issues, such as high debt burdens, cash flow disruptions, loss of demand, risks of bankruptcy and risk of worker layoffs. However, a study of food system policy measures for MSMEs in nine low- and middle-income countries between March 2020 and March 2021 found that most pandemic-related interventions consisted of short-term relief, rather than long-term policies and programmes to strengthen their resilience capacities.[23]

Although most of the countries in the study had a mix of measures to ensure different types of MSMEs would be reached, the better-connected and larger food system companies operating in the formal economy benefited most from these policy measures. Consequently, the most vulnerable agri-food MSMEs – including smaller enterprises, women-led enterprises and those without legal status -received limited support from governments during the COVID-19 pandemic, despite their critical role in supplying nutritious food to communities.

Notably, some countries did adapt programmes in more transformative ways to support the needs of MSMEs in maintaining food supply chains. For example, in partnership with the Development Bank of Ethiopia, the Government broadened options to access soft loans (below market interest rate) to cover short-term (three month) operational costs (such as utilities, costs of premises and rent) for both registered and

informal businesses in the most affected sectors (such as restaurants, wholesale, construction, transport), to address disparities for women with limited access to capital.

The Reserve Bank of India offered loans for women through self-help groups in rural regions and provided longer-term financial support through credit lines with up to ten-year repayment options under favourable conditions, including postponed payment without interest during the first seven years. Ethiopia and Nigeria also introduced support for longer-term recovery, including transformational polices such as the permanent change in financial regulation to allow registration of movable assets for loan collateral, which increased access to capital. Other programmes with long-term relevance in Rwanda and Nigeria focused on stimulating e-commerce and integrating digital public services in new and existing MSMEs through offering technical assistance to overcome sales disruptions and transition to e-commerce and registering new e-commerce businesses.

→ Policy lessons learned

Policies and programmes that aim to support the resilience of food systems should intentionally include support for MSMEs due to their essential role in food supply chains and food security. The financing and technical support for MSMEs demonstrated both adaptative and transformative capacities of the food system, enabling their continued operation during the crisis, and even addressed structural inequities reaching women and small, unregistered or informal enterprises. Strengthening the financial, operational, and technical capacities of MSMEs can strengthen the resilience of the food supply chain and help ensure access to affordable, nutritious food for the communities they serve.

6. Scaling up an existing food fortification programme in Peru to meet increased demand during the pandemic

Before the COVID-19 pandemic, millions of people in Peru relied on Government-led social assistance programmes for essential food support. However, the pandemic and its aftermath resulted in rising food prices, income loss and poverty, leading to a significant increase in demand for social assistance, particularly for the poorest and most nutritionally vulnerable.

In 2017, the Government of Peru launched a long-term, collaborative initiative aimed at fortifying rice with 10 essential micronutrients across all social assistance programmes.[24] The goal of the fortification programme was to address micronutrient deficiencies in the country, with a particular focus on preventing iron deficiency anaemia in children under 3 years of age (39 per cent of whom were anaemic in 2021) and women of reproductive age (19 per cent of whom were anaemic in 2021).

The collaborative effort was led by the Peru National Centre for Food and Nutrition (Centro Nacional de Alimentación – CENAN) and involved a wide range of partners, including multiple government ministries, multinational and local entities from the private sector, miller associations, civil society organizations, academia and the United Nations. By working together, this joint initiative led to strengthened policies and a robust network of fortification partners committed to the rigorous testing and distribution of fortified rice.

In its initial phase, the fortification programme successfully created demand by integrating fortified rice in the country's social protection programmes, including the national school meals programme, the national food supplement programme, a large-scale early childhood development programme, and a family-based social assistance welfare programme, including the school feeding programme. By 2019, the first year that fortified rice was integrated into the national school feeding programme 'Qali Warma', 2.4 million children were reached.

Absorptive and adaptive capacity: Leveraged the programme's strong producer network to meet increased demand during the pandemic

At the outset of the pandemic in March 2020, the fortification programme quickly scaled up production and distribution to meet the growing demand for social assistance. Its ability to adapt was largely attributed to the strength and flexibility of the partnerships and structures that had been established earlier. By 2022, more than 3 million Peruvians, including those who were nutritionally vulnerable or lived in poverty, benefited from fortified rice through the four key social protection programmes.

In 2021, rice fortification was institutionalized through the enactment of a mandatory rice fortification law. This legislative milestone further expanded access to fortified rice across the country, increasing the broader population's intake of essential micronutrients.

→ Policy lessons learned

The success of the fortification programme during the pandemic highlights the importance of multi-sectoral collaborative partnerships. By involving multiple government ministries, industry and local private sector stakeholders in the design and implementation, the programme was able to rapidly expand during the crisis. Social protection programmes that include fortified food commodities, such as fortified rice, and that can be expanded during crises, can have a positive impact on nutrition outcomes.

Crises can also provide opportunities for important policy changes that can improve and expand programmes in the longer-term. The close collaboration between industry partners and key decision-makers in the education and social protection systems ensured flexibility and resilience of the fortification programme.

EDUCATION SYSTEM

7. School meal programmes worldwide pivoted to use alternative delivery platforms

At the height of the COVID-19 pandemic, school closures resulted in disruptions to vital school meal programmes for 370 million children in more than 160 countries.[25] The loss of these school feeding programmes prompted national governments, often in collaboration with international and community organizations, to pivot to alternative delivery platforms to address the nutrition needs of these vulnerable children.

Depending on their situation and context, governments implemented different approaches to adapt their school feeding programmes to the new realities. The World Food Programme (WFP) reported that by June 2020, three out of four countries had adopted alternative school meal delivery mechanisms.[25] These mechanisms included the use of take-home rations, cash-based transfers and a combination of home delivery, cash or vouchers. In addition, in countries where schools remained open, specific attention was given to WASH measures to ensure proper hygiene and food safety.

Adaptive capacity: Coordinated delivery platforms to support essential nutrition security

- In Kenya, the national school feeding programme increased the number of students served during the pandemic, but the size of rations and the frequency of meals decreased. The programme moved from targeting students for support to targeting families. Ingredients were provided to students or their parents to pick up at the school to prepare and eat at home. In addition, corn soy blend (a fortified blended food) was introduced on the menu for students in grades 1, 2 and 3 to boost their intake of essential micronutrients.[26]
- In the Western Cape Province of South Africa, take-home rations were provided to more than 480,000 students as part of the province's School Nutrition Programme.[25]
- In Brazil, the Government pivoted to deliver purchased foods directly to the families of students and expanded the reach of the Bolsa Familia social welfare programme by 1 million families.[25]
- In Cambodia, WFP collaborated with the Ministry of Education, Youth and Sport to distribute food stocks from WFP warehouses as take-home rations to more than 100,000 households with primary school children.[25]
- In the Bahamas, the feeding programme aligned with social protection system services such that the families of school children received monetary support or vouchers to purchase food. The budget for school feeding increased during the pandemic and more students were reached by the programme. The Government also digitized its application process and developed an up-to-date database of students and parents.[27]

→ Policy lessons learned

Policy- and decision-makers across systems (e.g., education, health, social protection) collaborated to identify and implement practical ways to maintain nutrition support for vulnerable children and their households. Political will was essential to endorse and implement these rapid and high-profile changes. Databases were shared and technology was used to improve ease and efficiency of the application process and databases.

The success of school meal programmes in adapting to the challenges of the COVID-19 pandemic contributed to the remarkable resilience and resurgence of these programmes as schools reopened. In 2023, an estimated 418 million children were receiving school meals worldwide, an increase of 30 million from pre-pandemic levels in early 2020.[28] Medium and high-income countries,

fuelled by domestic resources, accounted for 90 per cent of the increase in programmes.

Despite the resurgence of school feeding programmes in medium- and high-income countries, many low-income countries faced challenges in returning to pre-pandemic programming levels. However, several national and subnational governments have recognized the immense value of these programmes and are taking steps to expand and improve access. For example, Kenya launched the largest school feeding programme in Africa in June 2023, aiming to provide daily lunches for 4 million primary school children through collaboration between the national government, county governments, civil society and local farmers.[29]

SOCIAL PROTECTION SYSTEM

8. Rapid expansion of social protection programmes to reach new population groups in Colombia and South Africa

Social protection programmes played a vital role in safeguarding nutrition outcomes for the most vulnerable populations during the COVID-19 pandemic and other subsequent crises. Experiences in South Africa and Colombia exemplified the challenges and demonstrated the adaptations made to achieve results while also being transformative.

South Africa, adaptive capacities: Used technology and coordinated with other systems to scale up an existing programme to reach half of the population

In South Africa, the Government undertook a massive expansion of its social protection programme to support the poorest and most vulnerable people during the pandemic.[30] The programme expanded the level of support for those households already receiving cash payments by using existing lists of participants and payment channels to roll out top-up payments quickly and effectively.

The programme implemented innovative adaptations to accommodate newly vulnerable groups. Firstly, it changed eligibility for the Child Support Grant, which enabled more than 7 million more people, nearly all of them women, to receive child support of ZAR 500 (US$34) a month for five months (totalling about US$170). Second, the Government introduced a new temporary cash transfer programme, the Social Relief of Distress Grant of ZAR 350 (US$23) a month, for a first round of one year (totalling around US$280) and a second round of eight months, for working-age individuals who had no other source of income.

To streamline the application process and reduce the barriers to eligibility, the Government coordinated the social protection databases with other systems and leveraged technology. Eligibility drew on the existing public registry, which allowed efficient and accurate targeting of the emergency response. Private sector technology was used to manage the massive influx of applications, since in-person applications were not possible during the lockdown and the existing grant application system was not adequate. Applicants could apply through a mobile app, a government-run WhatsApp channel or a special website. Despite these efforts, operational challenges arose in processing the massive influx of applicants in a short time, particularly for people in remote areas with limited mobile connectivity.

Despite the operational issues, the programme's adaptations extended coverage of the social protection system to an additional 13 million people. At its peak, the programme covered 32 million people in a country with a total population of less than 60 million. Notably, this was the first time that such support was made available to working-age adults without any work requirements.

Colombia, adaptive and transformative capacity: Expanded eligibility of an existing programme to reach new unserved and underserved populations

At the beginning of the pandemic, the Government of Colombia launched an innovative expansion of its existing social protection programme to address the food security crisis.[31–33] Initially, targeting the most vulnerable Colombian groups, the programme was later adapted to include migrants.[32,33] Colombia's efforts to adapt the programme for migrants were rooted in the constitutional protection of the right to health care for Venezuelan migrants and the constitutional right for foreigners to have the same guarantees to social security as those provided to nationals.

Migrants faced significant challenges due to informal work arrangements and a lack of legal documentation. Only 25 per cent of Venezuelan migrants had a standard employment contract in Colombia, with the majority working informally,[34] and almost half (45 per cent) did not have legal documentation.[33] When the pandemic-related lockdowns occurred in April to September 2020, there was a 50 per cent increase in the number of migrants

who reported having spent at least one full day without eating in the previous month, with twice as many women migrants reporting this coping mechanism compared to men (12 per cent versus 21 per cent).[32,35]

The social protection system adapted programmes and policies to address poverty and food and nutrition insecurity in migrants, including providing access to food banks, emergency school meals and cash transfers. Access to the formal labour market was also extended, with new two-year work permits, and migrants were granted access to essential social services, including education.[31-33] While applications for the social protection registry previously required permanent registration, these requirements were eased to allow applicants without fixed addresses and phone numbers in Colombia. Temporary migratory documentation expiration dates were also extended to allow migrants the right to work. In one department at the border with Venezuela, the expanded social protection programme rapidly reached more than 46,000 new beneficiaries with cash assistance.[31] In-kind food baskets were supplied to another 25,000 people for whom cash assistance was not a feasible option.

→ Policy lessons learned

Both South Africa and Colombia demonstrated strong political will in adapting their social protection policies and programmes to support significant numbers of vulnerable people during the pandemic. Leveraging existing systems, South Africa and Colombia provided higher levels of support to existing target groups while also extending assistance to new vulnerable groups based on socioeconomic eligibility. Adaptations included policies and technologies that reduced the barriers to accessing social protection programmes, and a programme to target gender inequities, such as providing supplements to caregivers rather than household heads. Despite implementation setbacks, including the challenge to reaching remote rural populations, the social protection programmes in both countries demonstrated their ability to be adaptive and transformative.

MULTISYSTEM

9. Safeguarding nutrition through multi-systems action in India

India has put in place policy and legislative measures that have brought nutrition and food security to the forefront of the development agenda within a rights-based and inclusive framework. A comprehensive National Nutrition Policy (1993),[36] National Nutrition Strategy (2017),[37] the National Nutrition Mission – POSHAN Abhyaan (2018),[38] and the more recent POSHAN 2.0[39] (which brings together the Integrated Child Development Scheme (ICDS), POSHAN Abhiyaan, the scheme for adolescent girls, and the national creche programme under one umbrella) – are the key reference points for nutrition programmes across the country.

The Government's commitment to nutrition is also reflected in the landmark legislation – the National Food Security Act, 2013[40] – which makes nutrition security a human right in India. With a comprehensive set of national policies and interventions, nutrition in India is addressed through multiple sectors and ministries with separate and committed budgets and a range of programmes that directly or indirectly address malnutrition, food insecurity and poverty.

Nutrition and food security programmes are integrated into India's wide-ranging social protection interventions. While India does not have a comprehensive and articulated social protection policy or strategy, social protection is synonymous with India's long existing poverty reduction strategy and as such, is an integral part of every social sector programme that addresses inclusion and poverty reduction. This means that social protection is embedded into different sectoral ministries targeting vulnerable populations, such as women, children, adolescents and the elderly. Furthermore, social protection measures present through a mix of preventive, promotional and protective interventions and are reflected across sectors like agriculture, education and health. Social protection is delivered primarily as social assistance, both in cash and in-kind. While predominantly led and resourced by central Government, states also contribute.

Nutrition and social protection programmes in India are delivered through multiple sectors led by different ministries. For example, the Ministry of Women and Child Development and the Ministry of Social Welfare are the lead ministries, with their long running flagship schemes such as the ICDS, which supports a large-scale national

Supplementary Nutrition Programme (SNP), as well as the recent POSHAN 2.0 Programme under the National Nutrition Mission. The Ministry of Education and its Mid-Day-Meal (MDM) programme is one of the largest and longest running school meal programmes in the world. The Ministry of Health and Family Welfare implements multiple supplementation and cash transfer schemes with a focus on pregnant and lactating mothers and adolescent girls. The Ministry of Consumer Affairs, Food and Public Distribution has been distributing essential food grains at affordable prices through the Public Distribution Scheme (PDS).

In addition to these national social assistance programmes, poverty reduction and livelihoods support programmes, such as the Mahatma Gandhi National Rural Employment Guarantee Act and the National Rural Livelihood Mission under the Ministry of Rural Development, are in place to provide income support and social protection that is more transformative in nature, with the potential to contribute to sustained positive nutrition outcomes and food security.

Together, these programmes are designed to protect and promote food security and nutrition for the most vulnerable and excluded sections of the population underpinned by the principles of social protection. They aim to reduce inequalities and poverty and are delivered through multiple systems that include health, water and sanitation, education, nutrition, livelihoods, food supplies, etc.

The network of programmes and schemes have an extensive reach to households through a structured delivery mechanism from the state to the district, block and the Gram Panchayats (elected local body at the village level) and are supported by an extensive network of frontline workers – primarily, Anganwadi workers at the childcare centres, Auxiliary Nurses and Midwives at the health centres and Accredited Social Health Activists.[41]

While these efforts have led to improvements in the overall status of food security and nutrition, India is still faced with the challenge of persistent levels of malnutrition among children and pregnant and lactating women, especially in the lowest income quantile.[42,43] A high prevalence of malnourished children and women, micronutrient deficiencies alongside rising trends prevalence of non-communicable diseases, have persisted in the country, even prior to the COVID-19 pandemic.

Safeguarding income, food security and nutrition in the response to the pandemic

In response to the COVID-19 pandemic, the Government of India imposed prolonged restrictive measures that started on 25 March 2020 and were gradually lifted beginning in June 2020. The pandemic caused increased food insecurity and financial burdens and had a spiralling effect on all aspects of life and society. It also increased the risk of nutritional vulnerabilities due to service interruptions, loss of livelihoods, rising food prices and recurrent bouts of economic distress. Several studies collected data on the pandemic's impact on dietary intake among household members and found an overall reduction in meal frequency and quantity. The socioeconomic impacts of COVID-19 measures had a negative impact on household income, food security and child nutrition.[44,45]

The role for expansion of social protection at the forefront of the response strategy

The pandemic adversely affected livelihoods including employment and production and led to significant job losses in small- and medium-scale enterprises. Social protection was considered a necessary measure as a large proportion of India's population earn less than US$3 per day and live close to the national poverty line.[46] Over 90 per cent of India's workforce is in the informal sector, with limited savings or workplace-based social security, including social insurance.[47] More than 9 million migrants who traverse state borders to work annually[48] face an increased risk because social assistance programmes in India are targeted within states, with limited flexibility across states. Hence, the Government of India's response to the COVID-19 pandemic positioned social assistance at the forefront of its strategy from the outset, building on the existing multiple, nationwide social protection schemes, particularly social assistance (food and cash).

Market-driven innovations helped rebuild a disrupted food system

In India, urban and rural food systems tend to be highly fragmented, in part because of the range and diversity of stakeholders in the supply chain. At the outset of the pandemic, food systems were severely disrupted: consumer prices rose, and producer prices fell. Small scale shops and informal street vendors were able to negotiate the challenges of the restrictive measures relatively better than larger, modern retailers. As the pandemic continued, the food system was able to demonstrate some resilience, especially when the Government triggered several initiatives to protect the food system, ranging from large-scale procurement of farm produce (e.g., wheat, milk, fruits, vegetables), to employment guarantees, cash transfers for farmers and

adjusted loan repayment schedules. In addition, the private sector played a key role, including through public-private partnerships and market-driven innovations (e.g., improved use of technology to better match supply with demand).

Disruption and adaptation to enable continuity of essential services in health, education and social protection

While health and nutrition services were immediately affected by the pandemic, the system quickly adapted to ensure continuity of some services. Most frontline workers and health care institutions were repurposed for COVID-19 tracing and treatment at the outset of the pandemic in March 2020, which disrupted the provision of regular health and nutrition services. Pregnant women in particular faced difficulties in accessing health and nutrition services at the community level.

Schools were fully closed for more than six months and partially for nearly 1.5 years,[49] disrupting school-based IFA supplementation and MDM programmes. While the Anganwadi centres remained shut for a larger part of the pandemic, services like the SNP, micronutrient supplementation (IFA and vitamin A), growth monitoring and promotion and infant and young child feeding counselling continued to be provided through home visits by community-based Anganwadi workers.[50] Most states had functioning Nutrition Rehabilitation Centres for the management of children with severe wasting, but access to these centres was challenging.

Children's immunization services continued during the pandemic.[51] Similarly, while school-based IFA supplementation and MDMs were disrupted because of school closures, Accredited Social Health Activists and Auxiliary Nurses and Midwives provided IFA supplementation during home visits. Furthermore, many State governments substituted dry rations, cash payments or a combination of the two in place of the hot prepared food provided through school MDM programmes.[52,53]

Home visits and door-to-door delivery of dry rations combined with antenatal visits throughout the pandemic period continued for pregnant and breastfeeding mothers. While information on coverage of the SNP is not publicly accessible, data from the Anaemia Mukt Bharat dashboard[54] indicates a modest decline in antenatal care services throughout the pandemic period. The proportion of pregnant women registered for antenatal care at the national level were 95 per cent in June 2019, 87 per cent in June 2020 and 85 per cent in June 2021. The percentage of pregnant women receiving four or more antenatal care visits decreased slightly, from 71 per cent in June 2019 to 69 per cent in June 2020. No data are available for June 2021.[51]

Village Health, Sanitation and Nutrition Days were restored to provide essential health services. Many initiatives leveraged cross-platform messaging services to continue delivering nutrition messages and counselling. For example, the State Government of Maharashtra introduced Tarang Suposhit, a digital platform with features like a WhatsApp chatbot, broadcast call and hotline number.[55] The Government of Odisha promoted healthy eating and COVID-19 appropriate behaviour through Tiki Mausi.[56] The Department of Social Welfare in Assam devised a remote sensing and supporting supervision mechanism. The tracking of nutritional status of expectant and nursing mothers and malnourished children in Odisha during the COVID-19 pandemic was also remarkable. In Gujarat, the State Government celebrated community-based events virtually by using a variety of digital channels, including the Umbare Anganwadi digital platform (UNICEF Innovations and Adaptations).[57]

Building on established platforms, a significant expansion to protect the most vulnerable

India's social protection system demonstrated resilience through both horizontal and vertical expansion, with a focus on reaching vulnerable population groups earning less than a dollar per day. The existing large-scale and well-established social assistance and 'safety-net' programme facilitated a rapid expansion during the pandemic. The potential to safeguard nutrition was enhanced given that two important programmes were already in place – the SNP targeting children, pregnant and lactating women and the MDM programme. Furthermore, several cash transfer schemes were in place,[a] which were recognized as potential functional platforms for expansion during the pandemic.

The Ministry of Finance swiftly announced the expansion of social assistance measures in response to the pandemic under the 2020 national Pradhan Mantri Garib Kalyan Yojana (PMGKY) scheme. [59] This entailed expanding (vertically and horizontally) existing social assistance programmes and introducing new initiatives, including[60] the introduction of *the Accelerating India's COVID-19 Social Protection Response Programme*. This new support was funded in two phases – an immediate allocation of US$750 million for the fiscal year 2020 and a second allocation of US$400 million for fiscal year 2021.[61] The first allocation provided cash transfers to 320 million recipients under the PMGKAY (a food security welfare scheme) and additional food rations for about 800 million recipients.

a For example, the Janani Suraksha Yojana (JSY-cash assistance), which had evolved to become a conditional cash transfer scheme for health (2005),[58] and the Prime Minister-KISAN yojana (PMKISAN-minimum income support to farmers).

The first phase was implemented countrywide through the PMGKY scheme, scaling up cash transfers and food benefits using existing national platforms and programmes such as the PDS (800 million beneficiaries)[62] and the Direct Benefit Transfers scheme (900 million beneficiaries).[63] It provided social protection for essential workers involved in COVID-19 relief efforts and benefited vulnerable groups, particularly migrants and informal workers, who faced high risks of exclusion. In the second phase, the social protection package was strengthened through stronger engagement of state governments and additional delivery systems based on local needs, including allocating money to agricultural activities.[64] During the first and second phases, from April to November 2020, almost 300 million tons of foodgrains were distributed monthly to 750 million beneficiaries nationally (94 per cent of the target population), [65] at an estimated cost of about US$15 billion.[66]

Other expansionary efforts included: nearly doubling the entitlements for more than 800 million ration card holders from April to November 2020 through allocating an additional 5 kg of foodgrains per person each month;[67] easing the eligibility criteria for affordable food rations to include migrant workers and other poor families; and targeting employment schemes to migrant workers.

Additionally, many states initiated their own social assistance packages. For example, in Bihar, the PDS was used as a springboard to give ration card holders a one-time transfer of INR 1,000.[68] In Uttar Pradesh and Odisha,[69,70] piggybacking on the extensive network of fair price shops to distribute food grains (in lieu of in-school cooked meals) to participants of the PDS scheme (fair price shop-PDS), essential items kits were distributed through the fair price shops in Delhi and Kerala. Leveraging existing delivery systems helped save crucial time and reduce errors in distribution. Several states made their own relief packages, which enhanced this amount of ration and/or increased the selection of goods covered by PMGKAY.

The Government's unprecedented efforts helped improve food security and post-food subsidy inequity for the most vulnerable. A 2022 International Monetary Fund report found that India's in-kind food transfers during the pandemic's first year played a key role in keeping levels of extreme poverty (income of less than US$1.90) stable during the first year of the pandemic, and even in slightly decreasing post-food subsidy inequality.[46] Additionally, a study in five eastern states found that in 2020, the PMGKAY cash transfer programme mitigated food insecurity; namely, moderate food insecurity decreased by 2.4 per cent and severe food insecurity decreased by around 1 per cent.[64]

Leveraging digitalization for expansion and for women's empowerment

The Government of India swiftly mobilized and scaled up technological advancements that already existed in national social assistance programmes.[71] The presence of the Direct Benefit Transfers was a major contribution, including the development of the National Electronic Fund Management System – a unified payment system that allows payment through the national ID Aadhar number into the accounts of social assistance recipients using biometric identification, including for unskilled workers. A Mobile Monitoring System also enabled real-time updates and decision-making.

In 2020, women owned approximately 6.5 million enterprises in rural India. These enterprises are typically cash-based operations and were particularly vulnerable during the pandemic. The Self-Employed Women's Association, which is India's oldest and largest trade union, responded by teaching its members how to open a digital account and make transactions. For many women merchants, the transition to digital payments was essential in maintaining their businesses during the pandemic. In addition, the transition to digital built a valuable foundation for the future growth of these enterprises by strengthening their financial capacity and giving the owners more time to focus on building their businesses. The Government of India is also implementing digital cash transfers to support women's economic empowerment and improve their individual, family and community resilience. This effort is narrowing both a gender gap and a digital gap by giving women online access to resources, such as credit and bookkeeping, that are useful for family and enterprise finances.

Sustaining and expanding nutrition commitments for the most vulnerable following the pandemic

The Government's budget for nutrition has long been stagnant in India. However, post-COVID-19, the National Nutrition Mission – POSHAN 2.0 – was reconsolidated with Anganwadi Services (an early childhood scheme under the ICDS)[72] into the integrated nutrition support programme 'Saksham Anganwadi and POSHAN 2.0' for women and children,[73,74] and three new programmes were introduced: the Rice Fortification Pilot Project for the distribution of fortified rice in one district in each of the 15 states; the One Nation programme to assist households, particularly migrant workers, to access food rations under the PDS; and the National Millet Mission for incorporating use of millet under the National Food Security Act.[75]

→ Policy lessons learned

Multiple systems supporting nutrition outcomes in India have demonstrated remarkable resilience during the COVID-19 pandemic. In particular, India's existing social protection measures, such as the PDS, played a pivotal role in providing food to households and acted as a safety-net for the poor.

Indian policymakers acted swiftly to reduce the financial impact of the pandemic on family income and consumption. While there were some disruptions in essential health services, these were quickly re-established through adaptations. Schemes like ICDS and the MDM continued to function by adapting innovative approaches, such as the provision of take-home rations and the mobile delivery of essential nutrition supplies. Digital platforms and mobile applications were leveraged to disseminate information, provide updates on COVID-19 and offer guidance on nutrition and health care practices. This integration of technology helped bridge the gap between frontline workers and the populations they served.

The demonstrated absorptive and adaptive capacities and (to a lesser extent) transformative capacities of the multiple systems needed to safeguard nutrition need to be sustained and further strengthened as India continues to face multiple shocks beyond the immediate COVID-19 pandemic. Climate change, lingering socioeconomic consequences, a global cost of living crisis and high inflation are resulting in sustained risks to food security and nutrition, particularly for the poorest and those living in rural areas.

Community capacities, combined with shock-responsive policies and financing commitments – including new financing mechanisms that responded to state-specific socioeconomic profiles and inequalities – were critical in the response. A systems approach that leverages several delivery systems for nutrition, including social assistance (cash and in-kind transfers), informed by inclusiveness (gender, disability, etc.) and shock-responsiveness (climate change and environmental sustainability) and delivered through a Single Social Registry, could be a game-changer in improving the efficiency of programmes in India.

Moving forward there is a need to bring these schemes together to deliver through a single system to increase coverage, improve efficiencies and optimize resources, including ensuring greater convergence of the multiple systems that deliver for nutrition.

Given the size, complexity and diversity of India, a single model of implementation will likely not work; however, a unified framework and approach are critical, illustrating the interconnectedness of systems, combined with a flexible system and some degree of decentralization in implementation.

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