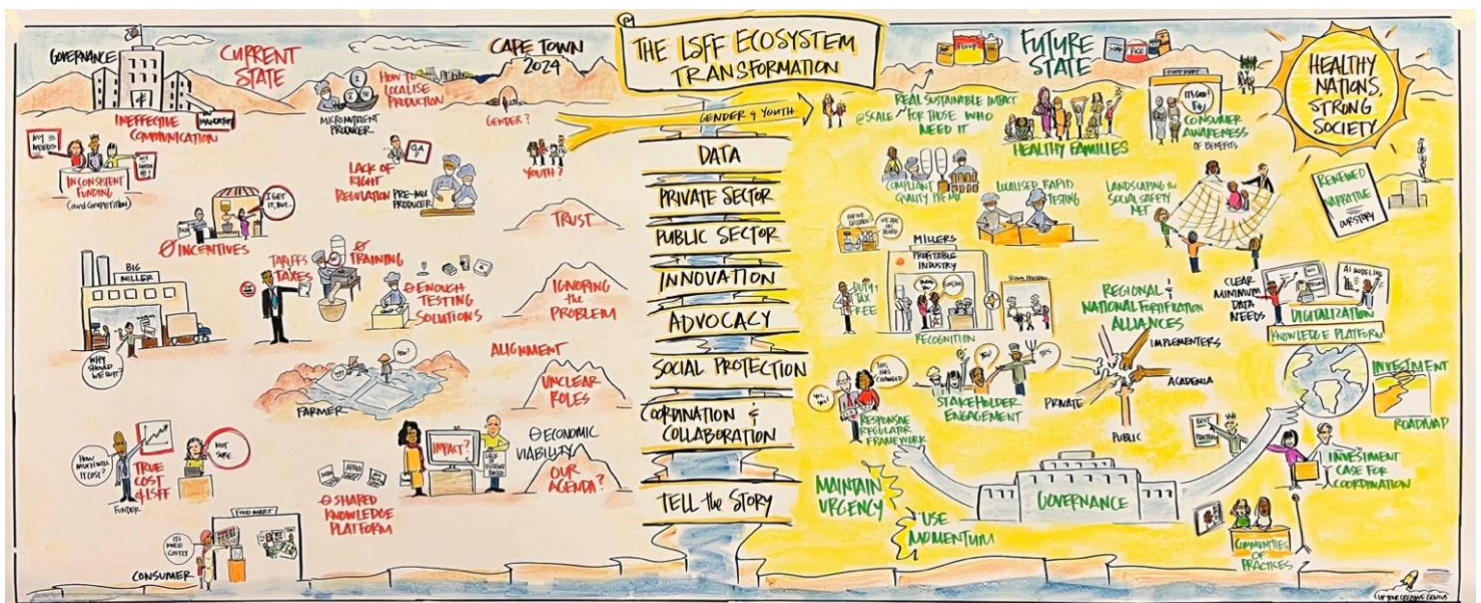


Progress Narrative: Delivering Together on Large-Scale Food Fortification

Priorities, Shared Commitments, and Progress Post-Cape Town Large-Scale Food Fortification (LSFF) Partners Convening

December 2025



Suggested citation: *Progress narrative: Delivering together on large-scale food fortification. Priorities, Shared Commitments, and Progress Post-Cape Town Large-Scale Food Fortification (LSFF) Partners Convening.* Washington, DC: Micronutrient Forum; December 2025.

Illustration credit for cover page: Patti Dobrowolski

Acknowledgements: This progress narrative was developed through feedback from the members of the Collaborative Action Panel (CAP) and other organizations that participated in the LSFF Partners Convening, including the Food Fortification Initiative (FFI), Gates Foundation, Global Alliance for Improve Nutrition (GAIN), Hellen Keller Intl, Food and Agriculture Organization of the United Nations (FAO), Micronutrient Forum, Nutrition International (NI), Organisation for Economic Co-operation and Development (OECD), TechnoServe / Millers for Nutrition (M4N), United Nations Children's Fund (UNICEF), World Food Programme (WFP), and the World Health Organization (WHO).

The CAP is a group of 10 participants selected to frame and share their high-level insights from the LSFF Partners Convening. Established before the meeting, they met virtually to agree on their own Terms of Reference and operating modalities, while also advising on the convening programme design. During the meeting, they reported back in plenary at the end of each day with their collective insights, adding a key forward looking action-orientated lens to the gathering. The original CAP members include Naveed Akbar, Shawn Baker, Paloma Fernandes, Beth Katz, Saskia Osendarp, Saskia de Pee, Luz De-Regil, Rajan Sankar, Larry Umunna, and Carol Welch. In November 2025, the CAP was expanded with new members to ensure the LSFF community is broadly represented. The new members include Manpreet Chadra, Meetu Kapur (replacing Carol Welch), Nail Lazrak, Helena Pachón, Laura Rowe, Juliawati Untoro, Florencia Vasta, and Riz Yusufali.

Introduction

Efforts to scale up large-scale food fortification (LSFF) have gained increasing global traction over the past decade. The first-ever global food fortification summit in Arusha, Tanzania in 2015, marked an important turning point. At that meeting, H.E. Tumusiime Rhoda Peace, then Commissioner for Rural Economy and Agriculture of the African Union, called for fortification to “*become a critical pillar of national food and nutrition security plans.*” This call to action catalyzed stronger commitments across sectors and regions. This vision was reaffirmed and elevated in 2023 through the adoption of the [World Health Assembly Resolution 76.19](#), which urges countries to “*accelerate efforts for preventing micronutrient deficiencies and their consequences, including spina bifida and other neural tube defects, through safe and effective food fortification.*”

Building on this call to action, the LSFF Partners Convening, held in Cape Town, South Africa in April 2024, brought together over 200 people from over 100 different organizations, including government, civil society, international organizations, academia, and the private sector. The meeting aimed to explore how to maximize the impact of LSFF through:

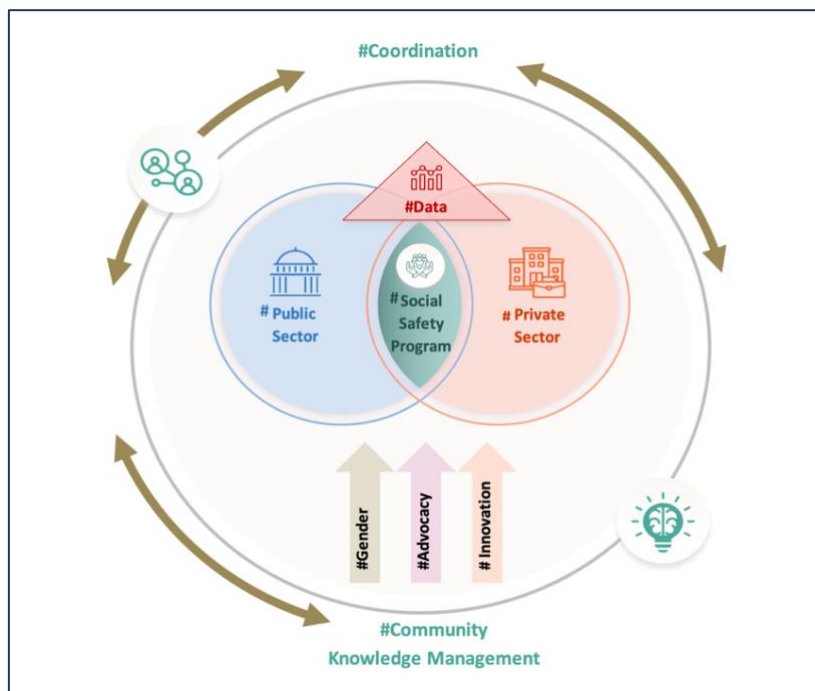
- **Strengthening the LSFF ecosystem** by increasing awareness among partners of one another’s work, results, challenges, opportunities, and emerging trends, and ensuring better aligned delivery efforts.
- **Identifying shared goals** and setting a collective ambition for the LSFF community.
- **Outlining concrete steps** for greater coordination and collaboration towards these shared goals.

Ahead of the LSFF Partners Convening, partner organizations contributed to an [LSFF Portfolio Book](#) profiling the work of 68 organizations, highlighting their geographic focus, programmatic activities, and technical expertise. During the convening, 27 partner-led working sessions created space for in-depth engagement on key themes, enabling participants to share successes, analyze challenges, and discuss opportunities for collaboration.

A key output of the convening was the [Manifesto for Accelerated Action on LSFF](#), developed by the Collaborative Action Panel (CAP). The CAP is a diverse group of technical experts who were tasked with synthesizing the session discussions into a set of long-term, evidence-based goals that reflect the shared priorities of the LSFF community. The resulting 10 recommendations in the manifesto provide a roadmap for collective action through to 2030, aligning with and operationalizing the WHA resolution, and offering a practical agenda to strengthen LSFF systems, ensure progress, and deliver measurable results.

The initial 27 working sessions discussions led to the articulation of Eight Actionable Pathways to guide implementation, which are described in more detail in the full technical report. These pathways represent an integrated, system-wide approach to LSFF, highlighting essential areas for investment and coordination. Some of the pathways, such as data, public sector, private sector, innovation, advocacy, emerged directly from the partner-led working sessions. Others, including the social safety-net programs (SSNPs), coordination, and community knowledge management, were shaped by recognition of persistent bottlenecks and opportunities to extend impact. The pathways are designed to be mutually reinforcing, with deliberate co-dependencies and sequencing to promote efficiency and synergy.

Figure 1: Eight Actionable Pathways: Synergies and Connections



This document, published almost two years since the LSFF Partners Convening, outlines progress against the long-term goals set out in the Manifesto, highlights areas where momentum has been maintained, and areas where additional effort, collaboration, investment, and alignment are needed.

Progress, Shifts, and Challenges Since Cape Town

Since the LSFF Partners Convening in April 2024, the LSFF ecosystem has been shaped by significant shifts in both global and national priorities. Between 2015 and 2022, Official Development Assistance (ODA) for LSFF averaged \$43.74 million annually. With the withdrawal of support from the United States Agency for International Development (USAID), combined with reductions from other bilateral donors, funding could fall by about 40% to ~\$24.47 million annually (following the methodology of [Osendarp et al., Nature, 2025](#)). These cuts threaten hard-won progress. Countries reliant on external aid face widening gaps in both financing and technical capacity, jeopardizing the progress made in reducing micronutrient deficiencies. Historically, donors have played a crucial role in financing LSFF programs, including the development of fortification standards, support for regulation, initial scale-up costs, and support of national fortification alliances.

At the same time, global food systems are undergoing transformations, with changes in production, trade, and consumption patterns influencing the availability and demand for fortified foods. This

evolving landscape underscores the need for innovation in fortification vehicles, formulations, and delivery models, alongside more targeted and sustained advocacy to keep LSFF high on political and policy agendas despite competing national priorities.

To be effective in this new environment, the LSFF community must take an even more strategic and collaborative approach. Multilateral institutions, philanthropic funders, and private sector partners can help fill the gap by pooling resources and prioritizing catalytic investments that strengthen national sustainability, such as national fortification data systems, and public-private partnerships to lower the cost of premix and fortification technology. Non-governmental organizations (NGOs) and technical assistance providers can complement program delivery with systems strengthening, helping governments integrate LSFF into broader health and food systems strategies. This includes supporting governments in developing clear accountability frameworks, creating incentives for industry compliance, and strengthening fortification monitoring. National governments must demonstrate leadership by committing domestic resources, ensuring cross-sector policy coherence, and engaging local industry stakeholders as partners in health.

Against this backdrop, several key developments demonstrate the collective momentum and progress on the priority recommendations from the LSFF Partners Convening. LSFF was elevated in the global nutrition policy spaces such as the March 2025 [Nutrition for Growth \(N4G\) Summit](#) in Paris and the World Health Assembly (WHA), with many countries making significant policy and financial commitments to support the delivery and scaling up of LSFF. Regional and national collaboration and coordination platforms have advanced through the establishment of new fortification alliances and coordination mechanisms such as the [Eastern and Southern Africa Coordination Mechanism on Universal Salt Iodization and Food Fortification \(ESA RCM\)](#) and the [Regional Food Fortification Alliance in West Africa](#) by the West African Health Organization (WAHO). Regulators now have clearer guidance and tools, and digital compliance systems are being piloted or scaled up in numerous countries. Delivery of fortified foods through social protection channels has improved and is reaching more than 2.5 million people regularly. New research with [Exemplars in Global Health](#) was launched to study successful LSFF country programs and generate lessons on how this was achieved to inform future programs. Private sector engagement is broader and more structured: [Millers for Nutrition \(M4N\)](#) was successfully launched in eight countries and the fortification industry in numerous countries is co-owning compliance agendas. Cost and access bottlenecks are being tackled through premix supplier assessments, targeted tax/GST/VAT measures and an HS-code proposal to normalize premix trade.

Operationalizing Goals to Accelerate Progress

Delivering on the long-term goals set out in the Manifesto, requires not only shared ambition but joint implementation. In 2024, partners identified a set of practical activities that can help sustain and accelerate progress towards these goals. These activities reflect the diverse mandates, expertise, and capacities across the LSFF ecosystem. To support this, partners have begun to map out (see **Table 1**) progress against activities and long-term goals, demonstrating how shared commitments are being translated into tangible results. For more information on any of these activities please reach out to the partners directly.

Achieving the goals also depends on the effective use of available tools, platforms, and data systems. The LSFF community already possesses a wide range of assets to support program design, implementation, and monitoring. Many of these tools, are ready to be deployed but remain underutilized. Others are still evolving and could benefit from further alignment and integration into national systems. Strengthening the coherence, accessibility, and uptake of these resources is essential to accelerate delivery. Doing so will help countries institutionalize best practices, improve the quality and consistency of fortified foods, and foster greater accountability across the LSFF value chain. To support dissemination of progress and uptake of resources and tools by the fortification and other adjacent communities, including lessons learned on successes and failures, [a webpage](#) to house resources and tools on the Micronutrient Forum website was created.

Table 1. Progress made towards achieving the long-term goals established at the LSFF Partners Convening

Manifesto Long-term Goal	Actionable Pathway(s)	Illustrative Activities	Status
<p>Rec 1: Improve compliance to ensure ≥90% of mandated foods are fortified to standard; 100% of premixes meet quality standards</p>	<p>Public sector; Private sector; Data</p>	<ul style="list-style-type: none"> ○ Map and analyze current policy and regulatory gaps (e.g., labelling, SME monitoring). ○ Provide digital and technical tools to support the public sector to strengthen regulatory compliance and promote regulatory harmonization. ○ Leverage private-sector expertise to support SMEs, remove LSFF adoption barriers, and publicly highlight champions. ○ Build and institutionalize knowledge and skills for compliance monitoring and enforcement through capacity strengthening efforts. 	<p>Map and analyze current policy and regulatory gaps</p> <ul style="list-style-type: none"> ○ Published the regulatory governance measurement framework for LSFF to assist policymakers and regulators in evaluating their legal frameworks and offers insights on how to improve regulatory practices and outcomes. (OECD) ○ Published guidance on how nutrition labelling can support LSFF. (George Institute) ○ Convened the Millers for Nutrition annual advisory group meeting in Mumbai to discuss compliance issues. (M4N) ○ Conducted an analysis on Regulating LSFF for SMEs to provide guidance to regulators to promote SME compliance with LSFF regulatory requirement. This paper is under review for publication and a presentation on this has been shared with members of the Global Fortification Technical Advisory Group (GF TAG) community. (OECD) ○ Conducted an analysis on Risk-based Inspections in LSFF, a key enabler and driver of cost-effective enforcement. This paper is under review for publication. (OECD) <p>Provide digital and technical tools to support the public sector</p> <ul style="list-style-type: none"> ○ Registered FoRTrace as a Digital Public Good (DPG) for traceability of fortified rice in SSNPs. (PATH, tech partner beehyv with Food Safety and Standards Authority of India (FSSA) and Food Corporation of India (FCI), Governments of Andhra Pradesh and Sri Lanka) ○ Implemented the Digital Fortification Quality Traceability Plus (DFQT+) in Bangladesh and in Nigeria to trace quality and compliance across the supply chain. (GAIN, TechnoServe, BioAnalyt, BASF, dsm-firmenich, Hewlett Packard Enterprise, local government institutions: Ministry of Industry, Bangladesh Standards and Testing Institution and edible oil producers; Standards Organization of Nigeria (SON), National Agency for Food and drug Administration and Control (NAFDAC), Federal Competition and Consumer Protection Commission (FCCPC) and edible oil and wheat flour producers) ○ Conducted market assessments on the availability of fortified foods with government and/or market research agencies in India and Ethiopia. (GAIN) ○ Scaled rapid test kits for measuring micronutrient levels in fortified foods, now commercially available for iodine (salt); iron (maize flour, wheat flour, premix, rice, bouillon powder, soy and fish sauces, corn soy blend); and vitamin A (edible oils, maize flour, wheat flour, sugar, bouillon powder, premix, liquid milk, milk powder). (GAIN, Nutrition International, Qulmpact) ○ Developed and published a protocol for a qualitative zinc spot test for wheat flour, maize flour, and rice under the USAID AFFORD consortium. (FFI) ○ Launched the Guideline on fortification of edible oils and fats with vitamins A and D for public health. (WHO) ○ Helped to normalize compliance as a competitive standard through the roll out of RMATT 3.0 (a real-time monitoring system) and a global compliance dashboard; launched AI-enabled Knowledge Hub pilots; and facilitated peer accountability and supported industry-led quality improvement through Kenya Millers Fortification Index (KMFI) and Nigeria Micronutrient Fortification Index (MFI). (M4N)

			<ul style="list-style-type: none"> ○ Providing technical assistance to public and private stakeholders to ensure that US state mandates have harmonized fortification standards. <i>(FFI)</i> <p>Leverage private-sector expertise</p> <ul style="list-style-type: none"> ○ Introduced self-regulation to support miller’s associations across multiple countries, including in Kenya and Pakistan, as a means of ensuring product safety and compliance to national standards. <i>(Nutrition International)</i> ○ Established a partnership to provide stable pricing and sustainable supply of vitamin A for oil fortification (\$59/kg for vitamin A and \$43.30/kg for vitamin A + vitamin D3 blend) in low-and middle-income countries through volume guarantees. <i>(MedAccess, dsm-firmenich)</i> ○ Improved access to quality-controlled premix through support to national premix distribution systems: established an edible oil fortification premix procurement and distribution system in Ethiopia; and a revolving fund for flour fortification premix and potassium iodate in Tajikistan to enable local currency purchases with short lead times and assured quality. <i>(GAIN)</i> ○ Piloted an off-taker partnership model in Tanzania to strengthen salt value chains, link small and medium enterprise (SME) salt producers to committed buyers, improve access to iodization inputs, upgrade infrastructure, and support producer associations, increasing production by 50%, doubling iodized-salt output (~500 MT to ~1,000 MT), and increasing number of producers (<10 to 52) and women’s participation (14% to 50%). <i>(GAIN)</i> <p>Institutionalize knowledge and skills in compliance monitoring and enforcement</p> <ul style="list-style-type: none"> ○ Delivered cascade training of trainers to strengthen monitoring and regulatory compliance capacity: on the FortifyMIS tool in Mozambique; and fortification monitoring in Ethiopia and Tanzania. <i>(FFI, UNICEF Eastern and Southern Africa Regional Office (ESARO))</i> ○ Published a free online fortification monitoring course (in English and Spanish) to guide planning for internal/external/import/commercial monitoring and data use; facilitated delivery planned in Latin America and the Caribbean (LAC) in 2026. <i>(FFI, WFP LAC Regional Office)</i> ○ Launched the VitaMin premix supplier assessment 2025, an independent evaluation of the nutrition policies and practices of 11 major fortificant producers. <i>(ATNi)</i> ○ Trained 200 quality control officers on analysis of vitamin A in vegetable oil in Burkina Faso, Côte d'Ivoire, and Madagascar. <i>(Helen Keller Intl)</i> ○ Addressed food safety bottlenecks integral to fortified food quality and compliance: in Kenya, partnering with Sanku to train millers, provide matched equipment grants, and establish mini-labs to address high aflatoxin levels in fortified maize flour; in Ethiopia, improving salt washing practices at Centralized Iodization Facilities (CIFs), reduce heavy metal contamination risks, and prepare the Ethiopian Food and Drug Administration (EFDA) lab for accreditation in heavy-metal analysis. <i>(Nutrition International)</i> ○ Installed fortification equipment and trained food producers on fortification quality assurance/quality control (QA/QC) protocols: rice millers in Ghana, Nepal, Sri Lanka, Nigeria, Senegal and chakki mills producing wholegrain wheat flour in Pakistan. <i>(WFP)</i> ○ Revised QA/QC operational manuals and inspection toolkits for regulators and industry in Dominican Republic and Kenya. <i>(WFP)</i>
--	--	--	--

			<ul style="list-style-type: none"> ○ Worked to strengthen laboratory capacity for fortified rice testing in Nigeria through the SON lab and in Bangladesh. <i>(WFP)</i> ○ Provided technical assistance to ensure that states’ mandates have harmonized fortification standards for corn mass fortification in the United States. <i>(FFI)</i> ○ Strengthened fortification compliance in 8 countries (Bangladesh, Ethiopia, India, Indonesia, Kenya, Nigeria, Pakistan, and Tanzania): provided tailored technical assistance to over 300 millers; expanded premix troubleshooting; enhanced lab partnerships; and deployed a tiered testing model targeting the attainable market; over 4 million metric tons (MT) of adequately fortified foods have been produced, with more than 85% of the market meeting standards in five countries. <i>(M4N)</i> ○ Conducted a regulatory change management workshop in May 2025 with SON (Nigeria) to exchange knowledge and good practices on regulatory governance of LSFF. <i>(OECD)</i>
<p>Rec 2: Ensure 100% of food in social assistance is fortified to national fortification standards</p>	<p>Social Safety Net Program</p>	<ul style="list-style-type: none"> ○ Strengthen SSNP delivery systems by enhancing public–private collaboration in food distribution and fortification. 	<ul style="list-style-type: none"> ○ Published a report for the Global Food and Nutrition Crisis Project that details the integration of fortified foods in social assistance programs. <i>(WFP)</i> ○ Integrated fortified foods into SSNPs in four countries under the WFP–Global Fund collaboration, benefiting ~2.5 million people regularly: Bangladesh expanded the coverage and reach of fortified rice through Vulnerable Women Benefit (VWB) and Food Friendly Program (FFP); Nepal introduced fortified rice in national social assistance and school meal programs; Pakistan expanded small-scale chakki wheat flour fortification linked to the Benazir Nashanouma Program (BNP)/Benazir Income Support Program (BISP); and Sri Lanka integrated fortified rice into the National School Meal Program. <i>(WFP)</i> ○ Piloted fortified rice in Kebbi State’s Home-Grown School Feeding Program, began expansion to national and other state level school meal programs, and exploration of broader social protection integration in Nigeria. <i>(WFP, Partners for PRiFN)</i> ○ Integrated fortified rice into numerous countries’ SSNPs: India’s Public Distribution System (PDS) reaching >700M people; Bangladesh’s VWB & FFP, reaching 12M people; continued fortified rice distribution in Rohingya camps, Bangladesh (~920,000 people monthly); scaled (Peru) or piloted (Cambodia, Ghana, The Gambia, Senegal) fortified rice in school feeding programs; advanced integration of fortified rice into social programs, monitoring systems, regional capacity building, and advocacy with retailers in Peru; utilized US-donated fortified rice for humanitarian operations as part of McGovern Dole School Feeding programs. <i>(WFP)</i> ○ Conducted trainings and high-level advocacy in Haryana, Maharashtra, and Rajasthan states, India, to include fortified wheat flour in the PDS, Integrated Child Development Services, and PM POSHAN (mid-day meal program). <i>(FFI)</i> ○ Secured a commitment from Government of Bangladesh to mandate distribution of fortified wheat flour in SSNPs. <i>(GAIN, Alliance for Prevention of Neural Tube Defects)</i> ○ Supported the Governments of Bangladesh, India and Indonesia to strengthen SSNP delivery systems and ensure the integration of quality fortified foods. <i>(Nutrition International)</i> ○ Supported SSNP-aligned millers with premix QA, blending optimization, and testing (especially for fortified rice in India, Indonesia, and Nigeria) to expand fortified staples in public procurement. <i>(M4N)</i>

<p>Rec 3: Develop effective, contextualized advocacy strategies that empower local champions.</p>	<p>Advocacy</p>	<ul style="list-style-type: none"> ○ Conduct political economy analysis to identify key moments to strategically define advocacy goals ○ Strengthen monitoring of LSFF commitments and advocacy for accountability. ○ Coordinate national and regional advocacy through fortification alliances and local civil society organizations (CSOs) for unified messaging. 	<p>Conduct political economy analysis</p> <ul style="list-style-type: none"> ○ Published the Political Economy Diagnostic (PEDAL) framework for LSFF and related resources (discussion papers, briefs, and snapshot). <i>(IFPRI)</i> <p>Strengthen monitoring of LSFF commitments and advocacy</p> <ul style="list-style-type: none"> ○ Published the global food fortification advocacy toolkit ahead of N4G Paris to support inclusion of LSFF in commitment-making. <i>(GAIN, FFI, GF TAG partners)</i> ○ N4G LSFF commitment guide published to support national, regional and global stakeholders in making SMART (specific, measurable, achievable, relevant, timely) commitments. <i>(GF TAG partners)</i> ○ Hosted a side event on LSFF ahead of the N4G Summit in Paris at the Civil Society Pavilion, spotlighting national commitments and progress on accelerating delivery of LSFF <i>(Micronutrient Forum, GF TAG partners)</i> ○ Released the Nutrition Accountability Framework N4G commitment tracker <i>(Global Nutrition Report)</i> ○ Hosted a side event at the 2025 World Health Assembly to elevate LSFF on the agendas of ministries of health and to facilitate global sharing of experiences and success, including by local LSFF champions. <i>(GF TAG partners, Spina Bifida and neurosurgical communities)</i> <p>Coordinate national and regional advocacy</p> <ul style="list-style-type: none"> ○ Launched M4N in eight countries localizing advocacy with strong in-country partners: Cereal Millers Association co-managing KMF; Confederation of Indian Industry (CII) leading joint advocacy and compliance strengthening at premix industry level in India; recognizing women fortification champions in Pakistan). <i>(M4N, local partners)</i> ○ Led advocacy efforts for bouillon fortification to align industry and government priorities in Nigeria, Senegal, and Burkina Faso (via stakeholder engagements, policy briefs, and technical workshops). <i>(Helen Keller Intl)</i> ○ Collaborated with civil society advocates in Mozambique to conduct an informal market assessment of fortified foods and advocate for private sector compliance and strengthen public sector monitoring (pull strategy). <i>(FFI, UNICEF ESARO)</i> ○ Developed Social Behavior Change (SBC) campaigns and multi-language media outreach (Senegal podcasts, Dominican Republic messaging). <i>(WFP)</i> ○ Developed a corn masa fortification advocacy toolkit for CSOs to encourage public and private stakeholders to fortify corn masa in the US; advocating for state governments to mandate corn masa fortification. <i>(FFI, GAPSBiF)</i> ○ Convened and supported local CSOs and advocacy working groups in Bangladesh, Ethiopia, and Nigeria to facilitate coordination across local organizations and development partners, and identify and achieve joint advocacy goals; in Bangladesh the National Heart Foundation and Alliance for the Prevention of Birth Defects; in Ethiopia this includes HOPE Spina Bifida and Hydrocephalus (HOPE-SBH), Alliance Against Birth Defects, Scaling Up Nutrition (SUN) Business Network, and Yadam Foundation; and in Nigeria the Civil Society Legislative Advocacy Center, eHealth Africa, SUN Civil Society Alliance, and Nigeria Economic Summit Group. <i>(GAIN)</i> ○ Hosted and organized five cross-organizational sharing sessions of the Global Fortification Technical Advisory Group (GF TAG). <i>(GAIN)</i> ○ Convened monthly meetings of the GF TAG Advocacy and Communications Working Group to coordinate sector-wide advocacy at major global fora and align on global LSFF priorities. <i>(GAIN, FFI)</i>
--	-----------------	---	--

			<ul style="list-style-type: none"> Leading a series of public-private dialogues to increase understanding of LSFF enabling environment and identify collaboration opportunities. (<i>GAIN, ATNi</i>) The Goalkeepers report in 2024 highlighted the importance of tackling malnutrition, emphasizing that food fortification offers a cost-effective path to significantly reduce micronutrient deficiencies, improve child development and survival, and support long-term economic growth. (<i>Gates Foundation</i>) Ladidi Kuluwa Bako-Aiyegbusi, the director-head of the nutrition department of the Nigerian Ministry of Health and Social Welfare was highlighted in the Times 100 list in 2024 bringing another important spotlight to food fortification.
Rec 4: Integrate LSFF into 100% of national food systems transformation pathways	Coordination; Advocacy	<ul style="list-style-type: none"> Develop global and national investment roadmaps with costed LSFF plans to sustain prioritization and keep LSFF central to the national nutrition agenda. Embed LSFF into broader nutrition coordination mechanisms so it is consistently addressed alongside other public health priorities. 	<p>Develop global and national investment roadmaps</p> <ul style="list-style-type: none"> Produced millers' business case tool outlining the costs of moving from no fortification to fortification to improve communications between public and private sectors; developed using data from Nigeria and Bangladesh (rice and edible oil). (<i>TechnoServe / M4N</i>) Developed and refined a local rice fortification costing tool, completing analyses for Senegal, Côte d'Ivoire, and Cambodia, with work underway in Indonesia. (<i>WFP</i>) Supported the review of Nigeria's Micronutrient Deficiencies Control Guidelines and development of a costed national roadmap for mandatory bouillon fortification. (<i>Helen Keller Intl</i>) Provided advocacy and technical assistance to the Government of Türkiye to embed LSFF into national nutrition coordination mechanisms and develop a national roadmap for wheat flour fortification with a cost-benefit analysis. (<i>FFI</i>) Drafted fortification strategies and costed plans in Angola and Namibia. (<i>FFI, UNICEF ESARO</i>) Developed a business case for maize micro-millers and scale-up models in Kenya. (<i>WFP</i>) <p>Embed LSFF into broader nutrition coordination mechanisms</p> <ul style="list-style-type: none"> Published guidance for salt fortification with iodine, which provides updated policy briefs to strengthen and sustain effective salt fortification strategies. (<i>UNICEF</i>) Launched an LSFF guidance note that provides guidance for governments on implementing LSFF programs to combat micronutrient deficiencies in children, women, and communities, focusing on integrating food fortification into national food systems to ensure nutritious diets are accessible and affordable. (<i>UNICEF</i>) Supported development of national fortification strategies in Cambodia, Senegal, and Kenya. (<i>WFP</i>) Updated Madagascar's national fortification strategy through a multi-partner process under USAID AFFORD. (<i>FFI, TechnoServe, Nutrition International</i>)
Rec 5: Facilitate investment – reduce tax, duty, and non-tariff barriers for premix/ equipment	Advocacy; public sector; private sector	<ul style="list-style-type: none"> Design and implement incentives in regulations (tax breaks, local premix production, reduced import duties). 	<p>Design and implement incentives in regulations</p> <ul style="list-style-type: none"> Submitted an amendment to request the World Customs Organization to include a dedicated Harmonized System (HS) code for premix used for food fortification, with the amendment accepted and the new code to come into effect starting Jan 2028. (<i>Global customs compliance, GAIN, Swiss customs</i>)

		<ul style="list-style-type: none"> ○ Expand access to up-to-date information on food-related laws, tariffs, and fortification standards through centralized, user-friendly platforms 	<ul style="list-style-type: none"> ○ Led advocacy to eliminate taxes and tariffs on imported premix and LSFF equipment in Nigeria and Bangladesh, including a study recommending premixes be included in the Presidential Order of Active Pharmaceutical ingredients. (<i>GAIN</i>) ○ Secured a 15% VAT exemption on import or local production of fortification premix for wheat flour, edible oil, and salt in Ethiopia. (<i>Nutrition International</i>) ○ Helped secure a recommendation at the 55th Council Meeting in India to lower the GST on fortified rice kernel from 18% to 5%. (<i>Nutrition International</i>) ○ Set up a revolving fund to increase premix availability for small-scale wheat flour millers in Pakistan. (<i>WFP</i>) <p>Expand access to up-to-date information on laws, tariffs, and fortification standards</p> <ul style="list-style-type: none"> ○ Supported legislative actions including validation of new fortification standard for rice, updated ministerial resolution, directive proposal, and dissemination plan for QA and monitoring in Peru. (<i>WFP</i>) ○ Expanded guidance on quality premix suppliers by adding to the GAIN Premix Facility (<i>GPF</i>) approved list: audited and approved 6 new premix producers in Türkiye, China, South Africa, India, South Korea and Vietnam, and 4 additional premix & fortified rice kernel production sites for existing suppliers in Türkiye, China and India. (<i>GAIN</i>) ○ Provided technical assistance to the Türkiye Ministry of Agriculture on premix procurement best practices, including reduced import duties, as they design incentives in wheat flour fortification regulations. (<i>FFI</i>)
<p>Rec 6: Strengthen national alliances to provide effective oversight and monitoring</p>	<p>Coordination</p>	<ul style="list-style-type: none"> ○ Establish and strengthen fortification alliances (or other similar bodies) to ensure seamless communication among stakeholders, by assessing their status, funding, capacity, and sustainability at national and regional levels. 	<ul style="list-style-type: none"> ○ Supported the fortification alliance in Bangladesh and POSHTIK in India; helped to revive inactive fortification alliances in Burkina Faso, Mali, Niger. (<i>WFP</i>) ○ Strengthened national alliances of public, private, and civic partners in the Philippines through a series of workshops to sensitize stakeholders on updates to fortification standards. (<i>FFI, NI</i>) ○ Provided logistical, financial, and technical support to strengthen Nigeria’s national fortification alliance. (<i>GAIN</i>) ○ Provided funding and technical support to national fortification alliances in Nigeria, Burkina Faso, and Senegal to convene critical meetings to discuss LSFF activities and compliance status. (<i>Helen Keller Intl</i>) ○ Supported Senegal’s national fortification alliance to validate the updated 2025-2029 food fortification plan. (<i>Helen Keller Intl</i>) ○ Launched the Regional Food Fortification Alliance in West Africa (March 2024, Cotonou) and held the first coordination meeting (July 2024, Abuja). (<i>Multiple partners</i>) ○ Convened Promoting Rice Fortification initiative (PRiFN) partners to support Nigeria’s national fortification alliance and achieve the goals and objectives in the national roadmap to scale up rice fortification. (<i>WFP, Partners for PRiFN (P4P): GAIN, Partners in Food Solutions (PFS), TechnoServe/ M4N, dsm-firmenich</i>) ○ Supported the Pakistan’s national fortification alliance when it was integrated in the Ministry of Health. (<i>WFP</i>) ○ Brought together regulators, laboratories, and food producers to coordinate action, share data, and strengthen oversight through influential national associations such as the Cereal Millers Association in Kenya, the Tanzania Sunflower Processors Association (TASUPA), and the Southeast Asia Edible Oil Industry Associations (SEA). (<i>M4N</i>) ○ Supported regulatory compliance strengthening and advocacy efforts of national fortification alliances in Burkina Faso, Nigeria and Senegal. (<i>Helen Keller Intl</i>)

<p>Rec 7: Ensure regional leadership through regional fortification alliances.</p>	<p>Coordination</p>	<ul style="list-style-type: none"> ○ Establish and operationalize regional coordination and harmonization ○ Leverage regional platforms to accelerate delivery and adoption of minimum fortification standards 	<p>Establish and operationalize regional coordination</p> <ul style="list-style-type: none"> ○ Established the Eastern and Southern Africa Regional Coordination on Food Fortification and Universal Salt Iodization (ESA RCM) and published a workshop report on the initial consultation in Oct 2024 detailing regional and country priorities (<i>ECSA-HC, SADC, GAIN, FFI, UNICEF, NI, IGN, WFP, other partners</i>) ○ Led the secretariat support for the ESA RCM, providing financial and logistical backing for regional consultations, a regional roadmap, and support to national LSFF strategies in member states. (<i>GAIN</i>) ○ Supported regional economic communities (ECOWAS, SADC, ECSA-HC, SAARC and ASEAN) to strengthen regional harmonization, coordination, and leadership; documented lessons learned for an upcoming report, with an anticipated release in early 2026. (<i>UNICEF</i>) <p>Leverage regional platforms to accelerate delivery</p> <ul style="list-style-type: none"> ○ Published ASEAN guidelines and minimum standards for implementation of mandatory LSFF in August 2024. (<i>UNICEF, ASEAN Secretariat</i>) ○ Planned and provided funding support to the West Africa regional fortification alliance for their virtual exhibition on LSFF (June 2025). (<i>Helen Keller Intl</i>) ○ Supported Burkina Faso to adopt ECOWAS harmonized fortification standards. (<i>Helen Keller Intl</i>) ○ Piloted the integration of fortified rice in the ASEAN Plus Three Emergency Rice Reserve (APTERR) in Lao PDR and Philippines, with scale up planned in Indonesia, Cambodia and Myanmar. (<i>WFP</i>)
<p>Rec 8: Ensure that 90% of LMICs have redesigned their food fortification programs to effectively reach vulnerable populations through an expanded portfolio of fortified food vehicles.</p>	<p>SSNP; Advocacy; public sector</p>	<ul style="list-style-type: none"> ○ Expand and diversify fortified food portfolios and standards to reach underserved and vulnerable populations. ○ Generate and apply evidence to target vulnerable groups and optimize food vehicle choice 	<p>Expand and diversify fortified food portfolios</p> <ul style="list-style-type: none"> ○ Supported the development and approval of the Nigerian Code of Practice for Food Fortification (NCP0123;2024) and the revised Nigerian Industrial Standard (NIS293:2024) for bouillon manufacturing; initiated a bouillon fortification project in Nigeria, Burkina Faso and Senegal. (<i>Helen Keller Intl</i>) ○ Introduced fortified maize flour in school meals via the Kenyan government’s Food Wheat and Maize Fortification Program (FWGA). (<i>WFP</i>) ○ Implementing a FY25-28 strategic initiative across nine countries in Africa and Asia to strengthen LSFF and fortified complementary foods (program models, quality standards, and the evidence base), including those produced by SMEs. (<i>Helen Keller Intl</i>) ○ Developed and adopted national rice fortification standards in Indonesia, Lao PDR, Nepal, Sri Lanka, Senegal, and Nigeria. (<i>WFP</i>) ○ Supported the development and launch of two new fortification standards for vegetable oil and bouillon in Madagascar. (<i>Helen Keller Intl</i>) ○ Supported the creation of a standard for fortified rice kernels (awaiting final approval by SON). (<i>WFP, GAIN</i>) ○ Provided technical assistance to update Philippines wheat flour fortification standards to ensure they are in line with WHO guidelines. (<i>FFI, Nutrition International</i>) ○ Supported the planning and design of a wheat flour fortification program in Azerbaijan. (<i>FFI, UNICEF Azerbaijan</i>)

			<ul style="list-style-type: none"> ○ Supported planning, implementation, and monitoring of a mandated wheat flour fortification program in Mauritius. (FFI) ○ Facilitated inclusion of bouillon fortification in Nigeria’s policy dialogues. (Helen Keller Intl) <p>Generate and apply evidence to target vulnerable groups</p> <ul style="list-style-type: none"> ○ Conducted needs assessments on the potential food vehicles for fortification in five West and Central Africa countries: Burkina Faso, Senegal, Benin, Mauritania, Guinea-Bissau. (WFP) ○ Generated evidence and supported advocacy in Ethiopia to ensure fortified foods or complementary strategies reach populations not covered by current policy. (EPHI, FBIRDC, EFDA, Addis Ababa University, WFP) ○ Supported evidence generation and advocacy through India’s fortification TAG and MIMI on the additional benefits achievable if fortified rice standards were improved and fortified wheat flour were distributed through the PDS. (WFP)
<p>Rec 9: Share knowledge and data – improve coherence, reliability, and use of fortification data and knowledge systems.</p>	<p>Data; public sector</p>	<ul style="list-style-type: none"> ○ Set and adopt data and evidence requirements at national, regional, and global levels to support policy and regulations. ○ Establish systems to enable transparent and secure cross-sector data sharing for better coordinated monitoring and decision-making across stakeholders while protecting privacy. ○ Strengthen community knowledge management and mobilization by developing and disseminating resources documenting LSFF successes and failures to guide program design. ○ Facilitate workshops and platforms, linking public sector and academia to ensure understanding of data collection, analysis and use. 	<p>Set and adopt data and evidence requirements</p> <ul style="list-style-type: none"> ○ Developed the Food Fortification Blueprint, a seven-stage framework to strengthen LSFF design, implementation, scale-up, and monitoring; routine updates are underway to ensure its relevance, effective dissemination, and practical application for program planners. (Nutrition International, FFI) ○ Supported development of monitoring protocols for QA/QC and SBC indicators in the Dominican Republic and Senegal. (WFP) ○ Revised NutriDash to collect additional indicators on fortification (five submodules that capture key data on wheat flour, maize flour, rice, oil and salt); country reporting underway with a report expected mid-2026. (UNICEF) ○ Published global gap analysis on available fortification data to inform priority evidence needs. (GFDx) ○ Developed a micronutrient and fortification lexicon; updated it with a primer on public law and regulation to harmonize and better communicate legal and regulatory terminology across the nutrition community. (Micronutrient Forum) <p>Establish systems to enable transparent and secure cross-sector data sharing</p> <ul style="list-style-type: none"> ○ Formalized GFDx as the technical data partner for the ESA RCM. (GFDx) ○ Launched the new GFDx website with improved accessibility and translation in 100+ languages. (GFDx) ○ Added LSFF indicators from GFDx to the Food Systems Dashboard through an API. (GFDx) ○ Provided technical assistance to deploy national digital systems to track fortified food production data: Fortification Information System (FortIS) in Pakistan, Food Fortification Information System (FFIS) in Ethiopia, FoRTrace in India (West Bengal and Telangana). (Nutrition International) ○ Provided support to Ministries of Health to design and pilot an integrated food safety and fortification surveillance system in select countries. (Nutrition International) ○ Continued development and testing to integrate food fortification into the availability and apparent consumption estimates for select nutrients in the FAOSTAT Food and Diet Domain. (FAO) ○ Updated the Global Database on the Implementation of Food and Nutrition Action (GIFNA) in coordination with other relevant databases and dashboards. (WHO)

			<ul style="list-style-type: none"> ○ Conducted nutritional adequacy analyses and strengthened the information platforms for ESAR and Peru. (WFP) ○ Signed an MOU to align indicators between GFDx and M4N to support harmonized national and global reporting. (GFDx, M4N) <p>Strengthen community knowledge management and mobilization</p> <ul style="list-style-type: none"> ○ Initiated a global scoping review of regional and country fortification opportunities across key food vehicles, with completion targeted for mid-2026. (UNICEF, FFI) ○ Launched a new FFI website with updated country profiles that provide data on cereal grain fortification opportunities and progress; published a 2024 Annual Report that includes a summary of fortification progress for wheat flour, maize flour, and rice; co-authored nine¹ peer-reviewed publications; and produced five country-level technical reports for the USA,² Eswatini, Lesotho, and Comoros. (FFI) ○ Published a scoping review of digital tools used in food fortification. (GAIN) ○ Conducted randomized controlled trial and Micronutrient Intervention Modelling (MINIMOD) studies for bouillon fortification. (Helen Keller Intl, UC Davis) ○ Conducting the final review of the updated “<i>Implementing Food Fortification Programmes for Public Health</i>” (the “Orange Book”) with peer reviewer input, with publication slated for early 2026. (WHO, FAO, multiple partners) ○ Developed a draft Global Food Fortification Report aimed for potential launch around the WHA in 2026. (WHO, WFP, FAO, UNICEF). ○ Launched an Exemplars in Global Health LSFF collaboration to assess the global data landscape (complete, to be published) and identify countries demonstrating successful implementation of fortification delivery programs (in progress). This work will inform research to document how these programs achieved success (launch planned for 2026; findings published in 2027). (Gates Foundation, Exemplars in Global Health) ○ Conducted modeling on neural tube defect (NTD) reduction analysis and anemia reduction quantification. (IHME) ○ Completed a systematic review on Double Fortified Salt (DFS) efficacy and effectiveness for West Africa; submitted for publication in <i>Advances in Nutrition</i>. (Multiple partners) ○ Completed a DFS acceptability study in Ethiopia (under peer-review). (Nutrition International, EPHI, UC Davis) ○ Published a paper on evidence of the impact of LSFF on the prevalence of anemia. (Nutrition International, Emory University)
--	--	--	--

¹ Qi YP et al. (2024). [Folate and B12 status and NTD risk among nonpregnant women of reproductive age from Malawi](#). *Birth Defects Res*, 116(3):e2329; Adams KP et al. (2024). [The potential contributions of bouillon fortification to meeting micronutrient requirements among women and preschool children in Senegal: A modeling study using household consumption and expenditure survey data](#). *Ann N Y Acad Sci*, 1537(1):98-112; Wagh K et al. (2024). [A global update on the status of prevention of folic acid-preventable spina bifida and anencephaly in year 2022](#). *Birth Defects Res*, 116(5); Wessells KR et al. (2024) [Mandatory large-scale food fortification programmes can reduce the estimated prevalence of inadequate zinc intake by up to 50% globally](#). *Nature Food*, 5(7):625-637; Tsang BL et al. (2024). [Expanding fortification with folic acid: thinking outside the cereal-grain box](#). *Nutrients*, 16(9):1312; Tsang BL et al. (2024). [Introducing DFS in SSNPs in Madhya Pradesh and Gujarat in India](#). *Matern Child Nutr*, e13646; Dorbu AD et al. (2025). [Nutritional anemia reductions due to food fortification among women of childbearing age](#). *Matern Child Nutr*, e13801; Lamborn AL et al. (2025). [Development of a qualitative spot assay for zinc detection in fortified cereal grain matrices](#). *J Food Compos Anal*, 148:108201; Kancherla V et al. (2025). [Fortification ineffective in preventing NTDs in India due to regulation promoting inadequate levels of folic acid and vitamin B12](#). *Birth Defects Res*, 117(7):e2498.

² Food Fortification Initiative. (2024). [Corn Masa in the US: Supply Chain, Market, and Fortification](#). FFI: Atlanta, USA; Food Fortification Initiative. (2024). [Corn Masa Market Assessment: Products and Fortification](#). FFI: Atlanta, USA.

			<ul style="list-style-type: none"> ○ Publish a Lancet pre-print of modeling the costs and impact of LSFF on micronutrient inadequacy, and a modeling study on the cost of nutrient-adequate diets. <i>(GAIN)</i> ○ Conducted formative research to improve the Fortification Assessment Coverage Toolkit (FACT) coverage questions and a scoping review of coverage methods. <i>(GAIN, DataDENT, Genesis Analytics)</i> <p>Facilitate workshops and platforms, linking public sector and academia</p> <ul style="list-style-type: none"> ○ Hosted the Africa Regional Dialogue on Data for Action in Food Fortification in Oct 2025 to identify actionable solutions to improve the collection, access, and use of LSFF data in the ESA region. <i>(Micronutrient Forum, Ethiopia Ministry of Health and Industry, ESA RCM partners)</i>, ○ Convened the M4N data taskforce, making significant progress on metrics alignment for reach and compliance. <i>(M4N)</i> ○ Documented lessons from rice fortification pilots for cross-country learning. <i>(WFP, WCA, ESAR)</i> ○ Led capacity-strengthening activities to access and analyze Household Consumption and Expenditure Surveys (HCES) and other datasets to answer fortification policy decisions (India, Sri Lanka, Bangladesh, Tanzania, Ethiopia, Senegal, Malawi). <i>(WFP MIMI, MAPS and others)</i> ○ Supported knowledge-sharing platforms and contributed to data harmonization efforts through technical workshops and policy briefs in Nigeria and West Africa. <i>(Helen Keller Intl)</i>
<p>Rec 10: Integrate innovation agenda – develop prioritized plan to address program bottlenecks</p>	<p>Coordination; Community Knowledge Management; Innovation</p>	<ul style="list-style-type: none"> ○ Identify and prioritize unmet needs of program implementers and consumers to inform innovation. ○ Align innovation agendas by convening public, private, academic, and investor groups to define and fund joint priorities. ○ Adopt cost-effective solutions and innovative tools for community knowledge management ○ Build and maintain repositories for lessons learned, good practices, and SSNP delivery experiences for continuous improvement. 	<p>Align innovation agendas</p> <ul style="list-style-type: none"> ○ Expanded South–South exchanges, including: ○ Convening a multi-country dialogue in Jakarta. <i>(GHS)</i> ○ Hosting workshop with ECOWAS countries, Ethiopia, Madagascar. <i>(Multiple partners)</i> ○ G2G engagement between India and Indonesia on rice fortification, with immersion visits to India in Oct 2025. <i>(Multiple partners)</i> ○ Facilitated South–South learning exchanges: India/Bangladesh study tours; Nepal, Bangladesh study tour, regional dialogues in ESAR. <i>(WFP)</i> ○ Established a food fortification working group within the broader WHO Food Systems Community of Practice (CoP). <i>(WHO)</i> <p>Adopt cost-effective solutions and innovative tools</p> <ul style="list-style-type: none"> ○ Developed an AI-enabled Knowledge Hub product ready for public deployment and initiated operational integration with UNICEF, WFP, and FFI. <i>(Initial funding for beta version through Gates Foundation)</i> ○ Advanced DFS innovations: optimized encapsulated ferrous fumarate formulation in India; and product development and market introduction of DFS with iodine and folic acid in Ethiopia. <i>(Nutrition International, University of Toronto)</i> ○ Developed optimized blending equipment prototypes and local fabrication capacity in Nigeria. <i>(WFP)</i> ○ Created customized technical support packages for rice millers. <i>(WFP)</i> ○ Advanced a range of practical innovations that make fortification easier and more scalable and help industry and government partners overcome persistent bottlenecks and accelerate progress toward national fortification goals;

			<p>these include digital learning courses for mill workers, an AI-supported knowledge platform for fortification guidance, new distribution and market linkage models, and shared or low-cost testing and fortification solutions. <i>(M4N)</i></p> <p>Build and maintain repositories</p> <ul style="list-style-type: none"> ○ Advanced regulatory repositories for LSFF documents from different countries through enhanced information sharing among international organizations and other international groups. <i>(OECD, WHO, FAO, MNF, GFDx)</i>
--	--	--	--

Way Forward

The 2024 LSFF Partners Convening in Cape Town marked an important moment for the fortification community, bringing together diverse actors, generating a shared vision, and defining concrete goals for accelerated action. The Eight Actionable Pathways and the ten concrete, and evidence-based recommendations outlined in Manifesto serve as a unifying roadmap for action.

Since April 2024, progress has been made in multiple areas: regulatory tools and guidance have matured, regional and national coordination mechanisms are being established or revived, public–private partnerships strengthened, program reach for the most vulnerable populations has expanded, and advocacy priorities have been elevated in global nutrition fora and at the national level, leading to strong country commitments to fortification. Despite this momentum, funding constraints, competing policy priorities, deprioritized and underutilized data and tools, and persistent inequities in access to fortified foods underscores the urgency of sustained, coordinated efforts.

The way forward is not about inventing new priorities, and is more about finishing what has started and requires:

- Filling critical gaps in financing, data, and technical capacity through joint resource mobilization, catalytic investment, and improved integration of tools and platforms into national systems.
- Strengthening leadership and accountability at national and regional levels, with governments at the center, supported by private sector, civil society, and development partners.
- Embedding gender equality and inclusion into all LSFF pathways, ensuring that fortification programs reach and benefit the most vulnerable.
- Fostering a culture of knowledge sharing and innovation, where lessons learned are actively exchanged, new delivery models tested, and successes scaled.

The commitments outlined here are not the responsibility of any one actor, they belong to the fortification community, governments, industry, development partners, researchers, and advocates, working in concert to ensure that LSFF reaches those who need it most. These goals challenge us to act with urgency, evidence, and unity. What is needed now is unwavering collective follow-through, with every partner contributing to a sustained, collective push towards delivering on the promise of LSFF.