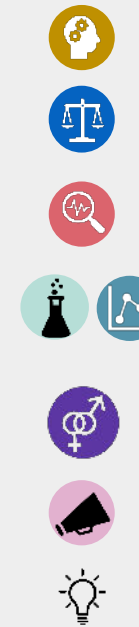
LSFF PARTNER CONVENING 2024

STRENGTHENING DELIVERY COORDINATION TO MAXIMIZE IMPACT

16-18 April 2024, Cape Town and online

LSFF PORTFOLIO BOOK

Table of contents



Introduction

Welcome to the Portfolio Book, a showcase of our partners' endeavors in strengthening Large-Scale Food Fortification (LSFF) delivery to maximize impact, serving both as an essential preparatory building block to our Partner Convening and as a resource which will continue to evolve through and beyond the event. This book is intended for learning and sharing, aiming to enhance awareness among partners about their work scopes, achievements, challenges, and trends in LSFF.

Each organization is presented with an overview and, if applicable, detailed accounts of one of their LSFF projects, highlighting objectives, partners and outcomes.

Each of the slides regarding the organizations will become a printed poster, summarizing - for presenting during the Convening - our joint efforts and the significant strides made in LSFF through public-private partnerships effective monitoring (QA/QC), research and advocacy.

Private sector

Workstream

Increasing the production of fortified foods and availability in markets by incentivizing the LSFF value chain and converting mills/food producers to quality LSFF.

Index:

Bangladesh Fortified Rice Mill Association (1/2)

Sayed Julfiqur Mahmud
sjmahmud71@gmail.com

Overview of our LSFF work

Focus geographies
Bangladesh

Our association is supporting the government of Bangladesh in distribution of Fortified Rice since 2017.

LSFF scope of work

We have been supporting the Bangladesh government to ensure supply of good quality fortified rice kernel (FRK) and fortified rice for scaling up the rice fortification initiative run by the government through two of the largest social safety net program (SSNP) in the country: Food Friendly Program (FFP) and Vulnerable Women Benefit (VWB).

Top 3 objectives

I. Supply Fortified Rice Kernel (FRK) to government SSNP program to address micronutrient deficiency malnutrition among vulnerable population in the country.

II. Provide fortified rice blending and delivery support to government safety net programs.

III. Introduce fortified rice in commercial market to address micronutrient deficiency malnutrition among general population in the country.

Challenges and gaps

I. Sometimes the government supply chain is disrupted due to funding and delayed fund allocation.

II. In-country testing facility is not enough to support timely quality check of FRK regularly.

III. The population is not aware of the benefits of fortified rice which is a major challenge for introducing fortified rice in the commercial market.

Coordination areas

I. Strong advocacy with the Government is required to ensure uninterrupted distribution of fortified rice to its safety net programs.

II. More technical support including capacity strengthening and QA support including increasing number of laboratories is required. Support needed by Bangladesh Fortified Rice Mill Association to establish a centralized laboratory.

III. Public awareness to support the introduction of fortified rice in the market throughout the country.

Food Friendly Program (FFP) and Vulnerable Women Benefit (VWB) - BRFMA (2/2)

Sayed Julfiqur Mahmud
sjmahmud71@gmail.com

Contribution to LSFF outcomes

We are providing continuous support to Government safety net programs for scaling up the distribution of fortified rice. The distribution coverage is now close to 12 million vulnerable population each year.

Results achieved

I. More than 450,000 MT of fortified rice is distributed in the year 2023.

II. 12 million poor and ultra poor population under the social safety net program received fortified rice throughout the country.

III. The Government has a plan to cover more than 24 million population under safety net programs by 2026 for which we have established our capacity to support the government through supply of required FRK and fortified rice blending support.

Theory of change

Impact:
Vulnerable population of Bangladesh have proper nutrition through rice.

Results:
Nutritious food available for vulnerable Bangladeshi.

Bangladesh government scaling up distribution of fortified rice in the safety net program.

Availability of fortified rice for the population who is not getting support from government safety net programs.

Activities:
FRK producers and fortified rice blending mills providing support to the government in this initiative through the production of FRK and blending of FRK with regular rice.

Delivery of fortified rice to government distribution points throughout the country.

Introducing fortified rice in the consumer market.

Collaboration in our LSFF work "Circle of friends"

Partners

Ministry of Food
Ministry of Women and Children Affairs
Directorate of Food Department of Women Affairs
World Food Programme
Nutrition International
TechnoServe
National Food Safety Laboratory
SGS

Users

Our target users are beneficiaries of government social safety net programs who receive fortified rice 30Kg per month per family under VWB program and 30Kg per month per family for 5 months in every year under FFP. Through commercial market our target users are general population.

Catholic Relief Services (1/2)

Mawuli Sablah, RTA Nutrition/Health, CRS
Mawuli.Sablah@crs.org

Overview of CRS and LSFF

Focus Geographies

LSFF Mainly in Economic Community of West African States (ECOWAS) – member Countries

CRS *strengthens systems and structures for sustainable impactful PPP enabling environment for LSFF*
Active in LSFF since ***2022 & over 5-Decades of Fortified Food Commodities in Nutrition Programming.*** *Human nutrition Central to CRS over 75-years of existence.*

LSFF scope and Contribution

I. Technical support to regional institutions (ECOWAS/ WAHO) & facilitating regional policy/ regulatory harmonization.
II. Reinforcing capacities of NFAs on PPP coordination and accountability frameworks.
III. Strengthening regulatory institutions to enforce compliance to mandatory standards.
IV. Market systems integration of LSFF with education health, food, WASH, education, and SP systems.
V. Local/ regional procurement of fortified commodities for school nutrition & RFSA programs.
VI. Local leadership drive of consumer and private sector industry associations for LSFF.
VII. Monitoring, evaluation, accountability and learning to improve impact of LSFF.

Key Objectives

I. Strengthen capacity of Public Private Partnership and alliances.
II. Improve food fortification environment to ensure compliance with regulations and standards.
III. Ensure high-performance MEAL systems on LSFF considering existing platforms.
IV. Deploy effective communication and social marketing on LSFF.

Challenges and gaps

I. Ineffective regional coordination to support national level adoption of harmonized frameworks.
II. Non-available innovative domestic funding to support functions of NFAs.
III. Weak data tracking and surveillance systems on coverage, compliance and impact of LSFF.
IV. Inadequate communication and social marketing for consumer awareness.
V. Weak external regulatory enforcement management systems.

Coordination areas

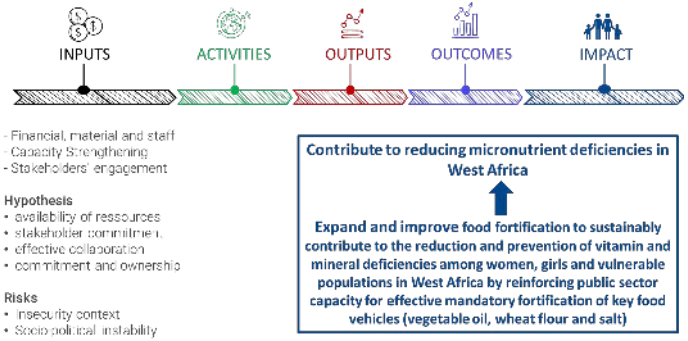
I. Formalize establishment of regional alliance for food fortification to coordinate efforts with National Fortification Alliances.
II. Develop joint national action plans and track implementation alignments.
III. Improve innovative domestic resources to fund national/ regional alliances for fortification beyond donor funding.

Large-Scale Food Fortification in West Africa - CRS (2/2)

Mawuli Sablah, RTA Nutrition/Health, CRS
Mawuli.Sablah@crs.org

Contribution to LSFF outcomes

I. Assessing public institutions capacities of food fortification, identifying gaps, and mapping of key actors.
II. Revitalizing National Alliances and supporting ECOWAS/ WAHO in the establishment of a Regional Alliance.
III. Strengthening public sector (regulatory and control) institutions in monitoring and enforcement of compliance to standards.
IV. Engaging industry associations to advocate for food fortification by their peers.
V. Engaging communicators, civil society actors in advocacy and awareness
VI. Supporting development of communication strategic plans and tools for consumer awareness.
VII. Supporting ECOWAS/WAHO in convening regional consultative meeting on large-scale food fortification with all stakeholders in the ECOWAS.



- Report on regulatory framework for food fortification in West Africa here.
- Report on Public Private Partnership for Food Fortification in West Africa here.

Results achieved

I. Revitalized 7 National Fortification Alliances out of the 14 existing in countries of the ECOWAS.
II. Improved technical capacities of public sector for monitoring and surveillance of fortified foods.
III. Reinforced capacity of regulatory institutions to enforce compliance to mandatory standards.
IV. Procured and donated 39 rapid analytical devices for micronutrients in fortified food to 4 countries (Burkina Faso, Cote d'Ivoire, Ghana, and Senegal).
V. Trained 119 regulatory control officers on the use of analytical devices to improve compliance enforcement in Burkina Faso, Cote d'Ivoire Ghana and Senegal.
VI. Trained 195 representatives of industries, consumer groups and club of journalists on food fortification.
VII. Supported ECOWAS and WAHO to convene consultations to establish regional alliance and capitalization of partners effort for sustainable LSFF in West Africa.

Collaboration in our LSFF work "Circle of friends"

Partners

ECOWAS/ WAHO
GIZ
UN-Agencies (Nutrition)
National Fortification Alliances
Public Sector Institutions
Industry Associations
Consumer Groups/ CSOs - Nutrition
Technical & Financial Partners –involved in Nutrition

Users

Vulnerable consumers – focus on women & adolescent girls
Regulatory enforcement institutions
Private sector food industries
Consumer associations and CSOs
Analytical device producers for micronutrient analysis
Equipment/premix producers for fortification
Government policy makers at national and regional level.

Cereal Millers Association of Kenya (CMA) (1/2)

Paloma Fernandes O.G.W
CEO, ceo@cerealmillers.co.ke

Overview of our LSFF work

Focus geographies
Kenya

Food Safety and Nutrition at the Cereal Millers Association is non-negotiable.

Active in LSFF since : 2015

LSFF scope of work (or interest/connection)

CMA control an estimated 90% markets share for wheat Meal and over 40% of Maize Meal. Role of CMA is to rally and build capacity of its members to commit and invest in LSSF with aim of guaranteeing safe and nutritious products.

Our interest as CMA is improving the nutrition and health outcomes of our consumers which increase productivity and economic situation of our consumers (target market). We want to change the narrative of malnutrition in our country

Top 3 objectives

I. Support policy issues in relation to the Government for industry competitiveness

II. Increase access and coverage of safe and nutritious food to over 38 million consumers in Kenya served by members

III. Contribute to the economic productivity of the country by changing the narrative of malnutrition thereby reducing the health burden.

Challenges and gaps

I. Low business case for food fortification exacerbated by poor quality inputs (Fortificants)
II. Low consumer awareness hence no demand for adequately fortified food
III. Lack of level playing field-inadequate surveillance and enforcement of food fortification standards
IV. Impact data- there is little or no impact data on the contribution of fortification

CMA millers 2023 CEO forum championing Nutrition

Coordination areas

I. Premix suppliers –establishment of premix supplier association with clear code of conduct

II. Enhancing the collaborative framework between government and private sector on information sharing and policy development

III. Innovations and digital solutions to LSSF

Kenya Millers Fortification Index
Cereal Millers Association Kenya (CMA) (2/2)

Paloma Fernandes O.G.W
CEO, ceo@cerealmillers.co.ke

Contribution to LSFF outcomes

Ensuring nutrition for all by providing millions of consumers served by our members access to affordable, safe, and nutritious food, with the goal of addressing acute malnutrition.

Additionally, we work with government to put in place policy framework for food processing sector to ensure industry adherence to food safety and fortification excellence.

Results achieved

I. Over 38 million consumers in Kenya reached with fortified foods
II. Capacity building of industry-in collaboration with various partners , we have continually improved capacity of industry to fortify through trainings, convening and recognition schemes
III. Millers for Nutrition- championing nutrition and mobilising members to do the right thing. CMA are founder members of this initiative

Theory of change

PRIVATE SECTOR IS SO POWERFUL. WE ARE PARTNERS IN THIS JOURNEY AND WE NEED TO GET IT RIGHT, OUR COMMITMENT TO FORTIFICATION MUST BE UNQUESTIONABLE.

- For the private sector, we must bear in mind , that a healthier populations means healthier markets and workforce. These are crucial to the survival of our businesses.
- We know our consumers .. we produce the food and have the power of our brands to influence customer decisions in the right direction.
- We need data! To encourage us and nudge us in the right direction at all times.
- We need a level playing field. Reward those complying; punish defaulting one.
- Self regulation is the answer!

Collaboration in our LSFF work "Circle of friends"

Partners

- Development partners-trainings, project studies, resource mobilizations, technical assistance
- Regulatory authorities-policy
- Suppliers-quality inputs
- Academic and research institution-research and development

Users

- Consumers-source of their nutrition
- Businesses-production of further products
- Marketing agencies-merchandising
- Government institutions

Eat Well Global (1/2)

Erin Boyd Kappelhof, CEO
ekappelhof@eatwellglobal.com

Overview of our LSFF work

Focus geographies
Global

Eat Well Global is a strategy and communication agency working within the food and health industries to accelerate positive impact on people, planet and profits.
*Active since 2012; active in LSFF since **2023***

LSFF scope of work

Current collaboration involves improving the availability and accessibility and relevance of digital resources, guides and information, networking opportunities for various groups of actors involved in LSFF, as well as empowering the ecosystem of actors.

In 2023, Eat Well Global conducted a large landscape analysis of LSFF resources and developed relationships with key stakeholders for further co-creation of a Knowledge Platform. We are also keen to apply our deep nutrition and communication expertise to other areas of need within the LSFF community.

Key objectives

I. Produce a sustainable online platform for accessing tools, knowledge, and support resources necessary to further drive the uptake and effectiveness of LSFF.

II. Foster connections between food processors and governments.

III. Scale the impact of LSFF.

Challenges and gaps

Detailed assessments by both BMGF and USAID have shown LSFF resources to be highly variable and dispersed: there is no single source for those who support or implement food fortification to find resources and there is high variation between and depth and purpose of the resources available.

Many LSFF technical partners host resources on their websites, but partners typically only host their own organizational resources. As a result, stakeholders and actors may need to visit multiple partner sites to find resources across their needs/program phases, may not be able to find what they are looking for, and could duplicate the efforts of another partner by producing a similar resource.

Coordination areas

I. Public and private sector communication

II. Incentivizing food producers rather than penalizing

III. Early government engagement, training and ongoing collaboration

Building Community and LSFF Knowledge Hub Platform (2/2)

Erin Boyd Kappelhof, CEO
ekappelhof@eatwellglobal.com

Contribution to LSFF outcomes

- Effective advocacy and communications
- Innovation in LSFF delivery
- Increase in accountability & compliance
- Private sector incentivization
- Public sector regulations and standards
- Data interfaces

Results achieved

I. Completed the development of the LSFF value chain, understanding the complex nuances between stakeholders.
II. Undertaken a major landscaping analysis of existing LSFF resources culminating in a comprehensive report and future recommendations for BMGF and other stakeholders.
III. Developed key relationships with stakeholders driving the progress of the LSFF Knowledge Hub.

Theory of action

We envision a comprehensive place to find up-to-date resources on food fortification: our goal is to create a digital solution with all the important knowledge in one place and a locally adapted user experience that supports public and private stakeholders in target countries, adapted to different user groups, cultures, and infrastructure. This digital knowledge platform will consolidate existing LSFF resources from relevant content providers. Gaps will be identified and communicated to the community of contributors.

The Knowledge Hub is envisioned as a digital-first platform with a mobile-friendly view. BMGF's work has developed a detailed initial prototype based on user experience research. This can be used as a foundation for the further development and implementation of the Hub.
This digital-first platform would have simple but powerful functionality aimed at making the site a tailored, practical tool for different users.

Collaboration in our LSFF work "Circle of friends"

Main partners

- Bill & Melinda Gates Foundation
- Futurice
- Nutrition Hub
- Alvarez & Marsal

Implementation & funding Partners
Bill & Melinda Gates Foundation

Users

Technical implementers (i.e., NGOs and others funded to support LSFF uptake)

National government policy advisors

Staple food processors

Endeva (1/2)

Christina Tewes-Gradl
c.gradl@edeva.org; +49 176 8203 9060

Overview of our LSFF work

Focus geographies
Bangladesh, India, Indonesia, Pakistan, Ethiopia, Kenya, Nigeria, Tanzania.

Endeva facilitates system innovation.
We work in LSFF since 2021.

LSFF scope of work

We facilitate the co-creation of the Millers for Nutrition initiative.

Endeva is committed to systems change for a more inclusive and regenerative society and the SDGs. Food fortification uses the power of business to improve nutrition. Our contribution is in helping to design a system change initiative that enables private sector to contribute to this goal consistently.

Top 3 objectives

Co-create a private sector led initiative – Millers for Nutrition - in order to:

I. Creates tangible rewards for quality food fortification for millers
II. Improve transparency on compliance via data collection from millers
III. Elevate the playing field

Challenges and gaps

I. Willingness amongst private sector to share data: We need to develop a sense of trust in how the data is managed and concrete benefits, e.g. in the form of business-relevant analytics
II. Consumer awareness and demand: Millers aim to benefit from quality fortification by improving their position in the market. However, consumers are mostly unaware and highly price sensitive. Millers for Nutrition aims to increase visibility and recognition of compliant millers.
III. Building relevance of the brand: Millers for Nutrition can only create rewards for millers if it is perceived by stakeholders as a relevant and credible initiative.

Coordination areas

I. Coordination of various data collection efforts and shared data collection and analysis process.
II. Private sector dialogue with regulator and viable testing and enforcement procedures.
III. Better testing infrastructure and capabilities locally.

Millers for Nutrition *- Endeva (2/2)*

Christina Tewes-Gradl
c.gradl@edeva.org; +49 176 8203 9060

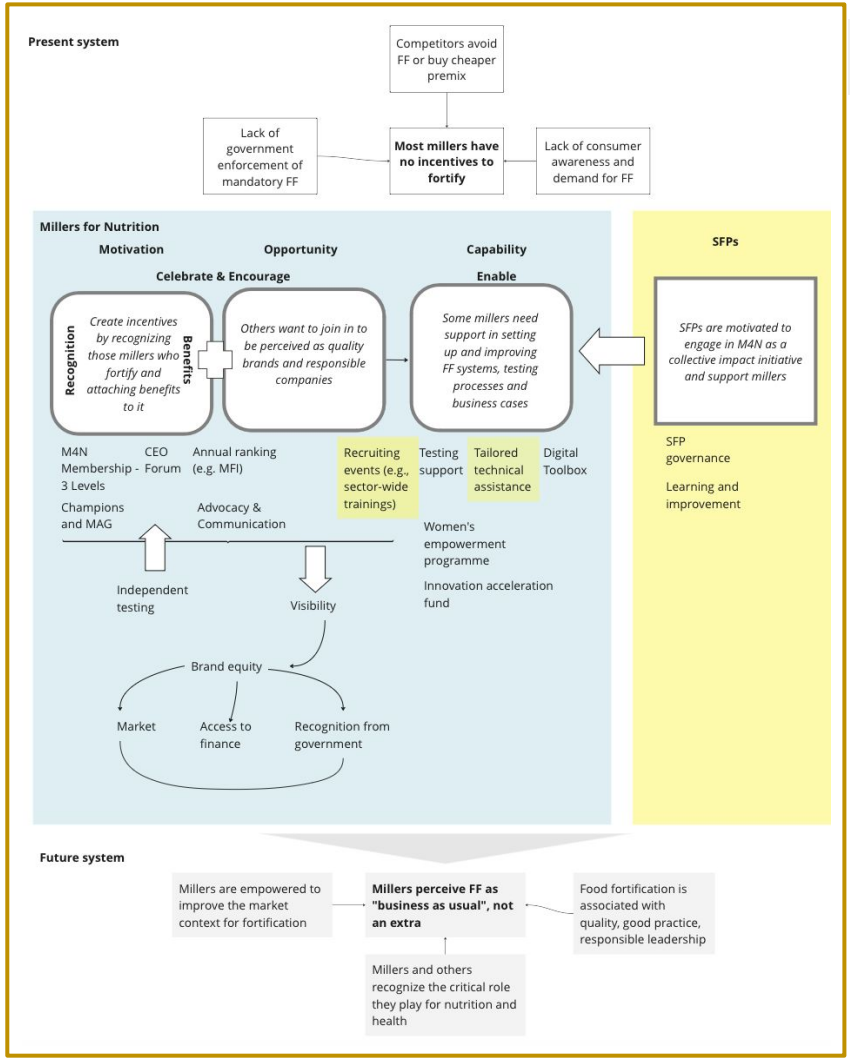
Contribution to LSFF outcomes

Millers are engaged and motivated to fortify, test, share data and advocate for LSFF.

Private sector partners in the value chain, including nutrient and premix producers, testing providers and technical experts,have a platform that coordinates their activities to support millers.

Results achieved

I. Key private sector providers, including champion millers, engaged to co-create private sector led coalition for LSFF.
II. Miller for Nutrition launched and set up, including global and in-country governance and team.
III. Country strategies developed.



Collaboration in our LSFF work "Circle of friends"

Partners

Private sector: BASF, BioAnalyt, dsm-firmenich, Hexagon, MC Mühlenchemie, Piramal, Sanku, millers.
Ecosystem partners: Technoserve (lead), GAIN, PATH, Micronutrient Forum.

Users

Millers in 8 focus countries.
By becoming members of Millers for Nutrition, they receive technical and testing support, and are celebrated and rewarded for high quality food fortification.

https://millersfornutrition.com

Fortified Whole Grain Alliance (FWGA) (1/2)

David Kamau, FWGA
dkamau@fwg-alliance.org

Overview of our LSFF work

Focus geographies
RW,BI, KE,UG,NG,GH, BJ, EG

The Alliance is committed to increasing the global consumption of fortified whole grain foods and fortified whole grain blends.

LSFF scope of work

The purpose of the FWGA is to sustainably improve the diets of school children, vulnerable populations, and eventually whole populations through increased consumption of fortified whole grain foods.

FWGA advocates for a food systems and diet shift by encouraging the consumption of fortified whole grain foods as opposed to their refined fortified counterparts. Our work entails supporting food processors with Technical Assistance (TA) for Fortified Whole Grain (FWG) production, capacity building and linking them to demand through institutional feeding programs.

Top 3 objectives

I. Research & development activities that focus on the increased shelf life, nutritional quality and consumer desirability of fortified whole grains and TA to the processors /millers.

II. Advocacy and social marketing through generating consumer insights to better understand consumption habits and patterns.

III. Policy, regulations and legislation/ standards engagements with relevant partners to assist in promotion of production and consumption of FWG foods.

Challenges and gaps

I. Lack of processors/ miller incentives due to lower demand for FWG products (business case); there is need for more consumer awareness creation on benefits of fortified whole grain foods to create continuous demand.

II. Lack of appropriate legislation/ standards on fortified whole grain foods and enforcement by regulatory authorities.

III. Technology gaps in FWG foods manufacturing – need more R&D for efficient and quality production systems and quality assurance.

Coordination areas

I. Governments alignment on FWG policies/ standards development and enforcement as well as the inclusion of FWG in school meals to create demand.

II. Funding partners collaboration to support FWG supply chain.

III. R&D – to develop appropriate FWG cost effective and quality processing technologies.

Fortified whole grains in school meals programs

Fortified Whole Grain Alliance (2/2)

David Kamau, FWGA
dkamau@fwg-alliance.org

Contribution to LSFF outcomes

Knowledge transfer and capacity building to millers on whole grain processing and fortification.

SBCC campaigns - awareness creation on nutritional benefits of fortification and whole grains foods.

Results achieved

I. Burundi: Reaching over **200,000** primary school children fed with nutritious mid-day hot meal (fortified whole grain maize meal) by WFP in schools they support.
II. Rwanda: Reaching over **30,000** primary school children in Rwanda fed with nutritious mid-day hot meal (fortified whole grain maize meal) by WFP in schools they support.
III. Kenya: Reaching over **40,000** ECD school children in Kenya; Muranga county with a blend of FWG maize & millet porridge.
IV. Economic empowerment to millers: 3 maize flour millers in Burundi, 5 in Rwanda and over 30 micro-millers in Kenya adopted FWG production during 2023 adding an extra revenue stream (with fortified whole grain products) to their businesses. Developed a miller's guide to help new & existing millers on fortified whole grain milling.

Theory of change

IF institutional food buyers introduce a menu that includes Fortified Whole Grain Foods (FWGs & FWBs), and

IF they find that it can be cost neutral, and

IF processors see a business case and express the willingness to invest in technology, have the capacity to produce the Fortified Whole Grain Foods (FWGs & FWBs), and have better access to finance, technology and markets,

THEN institutional and consumer demand will increase for the production and consumption of Fortified Whole Grain Foods, and

THEN the nutritional status of consumers, especially school children will improve thus mitigate the double burden of malnutrition.

FWG information video - Fortified Whole Grains - YouTube. *Study report on fortified whole grain maize meal shelf life extension technologies and nutritional preservation will be released in April 2024.*

Collaboration in our LSFF work "Circle of friends"

Partners

Rockefeller Foundation,
Novo Nordisk Foundation,
Global Alliance for Improved Nutrition,
Boston Consulting Group,
DSM-Firmenich,
International Maize and Wheat Improvement Center, TechnoServe,
Eastern Africa Grain council, Capiconic
Sight & Life (Rwanda), Tetra Pak,
University of Pretoria
Grain Millers (Capwell, Minimex, Mahwi, Unikorn & Burundi Fortified Foods),
Equipment manufacturers.
We collaborate with the various stakeholders to avail safe and quality products to consumers.

Users

Fortified whole grain foods are targeted to sustainably improve the diets of school children,
vulnerable populations, and eventually whole populations,
through increased consumption of FWG foods.

Hexagon Nutrition (1/2)

Vikram Kelkar – Managing Director
Vikram@hexagonnutrition.com

Overview of our LSFF work

Focus geographies
BD, CI, CM, ET, ID, IN, KE, KZ, MW, MY, MZ, NG, NP, PK, PI, RW, SL, TJ, TZ, UG, UZ, VN, ZA, ZM

HEXAGON NUTRITION *is a pure-play nutrition organization, with a focus on enriching our Globe since 1991.*

LSFF scope of work

We are the only holistic nutrition player that offers products across a wide range starting with micronutrient premixes, right up to therapeutic and supplementary foods and clinical nutrition products. We are one of the largest premix players in India and also export our products to more than 70 countries.

Hexagon Nutrition's contribution to LSFF :

To formulate and produce micronutrient premixes for supply to flour, rice and oil millers and the food industry at large. We have also set up the Centre of excellence for Food Fortification (CEFF) at NIFTEM in Kundli, Haryana, India which includes setting up model pilot fortification plants for Flour, Oil and Rice for the benefit of the academicians, millers, students, and society at large.

Top 3 objectives

I. Provide the right quality premix to the millers across geographies, and support to make fortification meaningful.
II. Develop long standing and sustainable relationships with millers, and engage in technical assistance with regard to analytical issues of micronutrients.
III. Work closely in a public private partnership to enhance the impact of our efforts in LSFF and engage with development partners and regulators to drive the fortification agenda.

Challenges and gaps

I. Regulatory Environment: In most of the LMIC's there is a lack of strong regulatory environment for monitoring fortification standards.
II. Level playing field: Some premix suppliers offer sub standard premix at attractive prices thereby defeating the purpose of fortification.
III. Testing of premix: Millers have limited ability to test the premix content for all micronutrients, thereby solely relying on the premix supplier to supply the right premix. Such being the case, premix price becomes the sole criteria for millers for purchase.

Coordination areas

I. Overcome resistance from Industry Stakeholders towards fortification.
II. Stringent monitoring of premix suppliers and premix quality.
III. Consumer Acceptance and Awareness.
IV. Alignment between Development Partners GAIN, WFP, PATH, TECHNOSERVE) Implementing Agencies in India (FSSAI , MoFPI) and Industry Associations (ASSOCHAM , CII , FICCI) at state and National level.
V. Enhanced multi sectoral coordination at National level (Food fortification and Nutraceutical conferences and seminars).

Centre of Excellence for Food Fortification - Hexagon Nutrition (2/2)

Vikram Kelkar – Managing Director
Vikram@hexagonnutrition.com

Contribution to LSFF outcomes

Hexagon Nutrition has contributed to establishment of the Centre of Excellence for Food Fortification at NIFTEM, i.e. the National Institute for Food Technology and Entrepreneurship Management which has been recognized by the Government of India as an establishment of National Importance.

Hexagon Nutrition has provided pilot scale fortification plants for Wheat Flour, Edible Oil and Fortified Rice, and also trained the technical staff at NIFTEM on the operationalization and maintenance of equipment and quality assurance and quality control.

Results achieved

Within a short time, the Centre of Excellence for Food fortification has made considerable progress in terms of developing specific training modules and manuals on food fortification.

It has trained more than 4000 industry partners, students of food technology and entrepreneurs through on site and virtual mode.

Theory of change

Activities:

Constant and meaningful engagement with relevant stakeholders in the LSFF ecosystem.

Outcomes:

Millers are committed to adhere to the stipulated standards of fortification.

Millers use the right quality premixes.

food processors, millers and functional food producers fortify their product correctly and achieve the desired level of fortification as per country specific RDA's / Standards.

Impacts:
Contribute to the cause of alleviation of micronutrient deficiencies and eradicating malnutrition in the most vulnerable populations.

Collaboration in our LSFF work "Circle of friends"

Partners
Technoserve, M4N, GAIN, FFI, PATH, BMGF, ASSOCHAM, CII, FICCI , HADSA.

Users
Staples food processors, millers and functional food producers are our users as they are fortifying their products with our micronutrient premixes.

Hystra (1/2)

Lucie Klarsfeld: Lklarsfeld@Hystra.com
Adrien Darodes: Adarodes@Hystra.com

Overview of our LSFF work

Focus geographies

Global (WIP report on private sector engagement in LSFF); West Africa (ongoing Bouillon fortification project).

Hystra is a global strategy consulting firm specialized in inclusive business; active in nutrition since 2014 and LSFF since 2021.

LSFF scope of work

- Capturing and **disseminating best practices for engaging with the private sector for LSFF** (ongoing).
- Supporting BMGF in its efforts to encourage **Voluntary fortification of Bouillon** cubes in West Africa (2021 – ongoing).
  - Analysis of incremental costs for various fortification scenario, to help inform policy and formulation standards.
  - Identification of barriers to fortification for bouillon producers and potential areas for support.
  - Recommendation on potential marketing interventions.
  - Program management support.

Top 3 objectives

I. Sensitize development organizations and key stakeholders on best practices to engage with the private sector and enable large scale fortification of staples and for targeted nutrition.
II. Identify private sector barriers to bouillon fortification in West Africa and potential areas where development institutions can provide tailored support.
III. Improve collaboration among stakeholders by ensuring private sector partners are heard and their concerns addressed.

Challenges and gaps

Debunking misconceptions about the private sector

- Optimal fortification formulation: not just maximizing health impact but rather maximizing cost-effectiveness.
- Cost of fortification: very small as % of retail price but much higher as % of producers' costs and margins, explaining reluctance/ challenge to fortify.
- LSFF does not require behavior change: true for consumers but it still require producers' behavior change, which should not be underestimated.

Addressing producers' skepticism towards development institutions engaging on PSE (initiative forced by MNCs, sensitivity of data shared, links with regulatory authorities).

Accessing accurate cost estimates in a highly competitive industry (specifically for Bouillon fortification).

Understanding barriers for local and small producers (till now involvement has mainly been from large producers).

Coordination areas

I. Priority coordination areas for more effective LSFF are:

II. Stricter monitoring and compliance to ensure those who fortify adequately are not penalized compared to non-compliant players.

III. Promoting replicability of best practices in producer engagement between countries and staple types (e.g., fully addressing the behavior change challenges faced y producers, providing expanded - not just purely technical - TA, etc.).

How to engage the private sector on LSFF: lessons learnt (2/2)

Lucie Klarsfeld: Lklarsfeld@Hystra.com
Adrien Darodes: Adarodes@Hystra.com

Contribution to LSFF outcomes (ongoing)

- Sensitize development organizations and key stakeholders on best practices to engage with the private sector and enable large scale fortification of staples and for targeted nutrition.
- Improving collaboration among LSFF stakeholders by ensuring private sector partners are heard and their concerns addressed around the business case for fortification

Results achieved

- Intermediary report insights will be shared at LSFF Cape Town convening to gather feedback and finalize
- A public, open-source report will then be released in May 2024

Theory of change

Disseminating lessons learnt from previous or ongoing fortification programs will help future engagements with private sector avoid past mistakes and strengthen their approaches, in particular around co-constructing the business case for fortification and valuing the support that the program bring in terms of indirect business benefits to the millers, ultimately leading to greater motivation and participation to the program and compliance with the standards, whether volun*tary or mandatory.*

Furthermore, acknowledging the challenges that the business case of fortification poses to millers, the report advocates for exploring other approaches to the design of fortification standards, drawing inspiration from the Bouillon consortium that has been looking at the respective cost-efficiency of specific fortificants and included the cost constraint in the equation from the start. In some cases, this type of approaches may lead to greater economic feasibility from the private sector's perspective, and ultimately lead to greater compliance.

Lastly, the report will also explore the benefits of self-regulatory mechanism, such as the MFI and advocate for the replication of such approaches, by putting forward to quantifiable benefits that it can bring to public authorities and the LSFF community at large.

Collaboration in our LSFF work
"Circle of friends"

Partners

BMGF and key report contributors: Technoserve, USAID, IFC, UC Davis

Users

The LSFF community at large, both from development sector (project funders and implementers, international standards advocates), the private sector (millers, input providers, etc.) and national regulators (Ministries and public agencies)

International Finance Corporation (IFC) (1/2)

Team/ Authors: Natia Mgeladze, Uy Duc Pham
Point of contact: Natia Mgeladze, nmgeladze@ifc.org

Overview of our LSFF work

Focus geographies

BD, IN, CBDA, KE, GN, ZM, UG, AO, SD, ET, ML, VN, YE.

Food and Nutrition Security is one of the World Bank Group's Global Challenge Programs. IFC is committed to the global nutrition agenda with its private clients since 2021 and LSFF since 2024

LSFF scope of work

The overall objective of the IFC food fortification program is to increase the adoption of food fortification (FF) by food processors already in IFC's investment portfolio or in the immediate pipeline in unregulated markets in selected countries and share knowledge and build sector capacity worldwide.

IFC made a commitment to continue proactively engaging on the global nutrition agenda with its clients alongside the World Bank. IFC assesses each individual agribusiness investment for its nutritional impacts and screens projects for nutrition-sensitive characteristics. IFC also reviews its annual agribusiness investments to track the proportion of financing that helps to diversify diets or improve access to key micronutrients.

Key Objectives

I. To implement and adopt changes to client product offerings by starting or expanding food fortification (FF) production lines through piloting and providing performance-based grants to offset a share of costs to adopt FF.

II. To provide advisory services to help clients realize FF and integrate gender considerations to improve access to nutritious foods in promoting FF interventions at the firm level.

III. Knowledge management, sharing and sector capacity building, including scoping assessments, awareness raising, TOT.

Challenges and gaps

I. FF has not reached its potential in emerging markets due to some perceptional, technical, capacity challenges amongst others. Moreover, information about the importance of consuming fortified foods is not yet widespread in many markets.

II. Lack of uptake by the private sector in the absence of regulations is frequently driven by basic misperceptions on what it takes to fortify food and the resultant impact on pricing, quality of end products.

III. Gaps in awareness about the required equipment, technical knowledge and skills to fortify products. Gender gaps in access and may impact women's decision on food selection and nutritious, and awareness of fortified foods and their benefits, especially for pregnant and lactating mothers.

Coordination areas

International development stakeholder networking, collective actions and engagements to drive global FF initiatives, including WHO, UN Agencies (e.g., UNICEF, FAO, UNDP), DFIs, GAIN, WFP, FFI, NGOs .

Private sector engagements and public-private partnerships and dialogues

Knowledge management, sharing and sector capacity building, public training, policy reform advocacy, awareness raising campaigns and consumers' education.

Performance-based Grants Food Fortification – IFC (2/2)

Team/ Authors: Natia Mgeladze, Uy Duc Pham
Point of contact: Natia Mgeladze, nmgeladze@ifc.org

Contribution to LSFF outcomes

IFC expects at least seven private company clients to receive the grants and/or advisory services to establish or expand at least one fortified food product line and each increase the volume of fortified products sold by these clients by at least 50%. This will contribute to US$7 million in increased sales revenues for clients collectively, in total, and US$500,000 in total costs avoided collectively within one year of project completion.

IFC also expects to conduct five scoping assessments, train at least 20 experts, who are expected to provide further training to 500 individuals in the sector, organize at least 10 events for 1,000 participant worldwide

Results achieved

I. Launched the project in February 9, 2024
II. Organized the food fortification awareness event in Vietnam in March 7, 2024 for 126 participants
III. Engaged one private lead firm in Vietnam to adopt food fortification

Theory of action

The project will launch a new initiative to support IFC clients in taking up food fortification through delivering performance-based grants and requisite technical assistance. It will also provide firm-level in-depth technical advisory services to IFC company clients as well as build sector capacity, awareness-raising campaigns, and knowledge sharing.

This project will target and pilot IFC investment clients in markets where food fortification is not yet regulated or already regulated, but questionable in enforcement and compliance; then scale up as needed. The project will also explore the role that women play in promoting food fortification.

The project will consist of three components. While Component 1 is fully allocated for the Performance-Based Grant, Component 2 and 3 will be allocated 50 percent of the remaining project resources to deliver direct benefits to individual firms and sector capacity, knowledge sharing and management.

Collaboration in our LSFF work "Circle of friends"

Project Donors
BMGF and Government of Japan

Project Partners
WHO, UNICEF, WFP, GAIN, OECD, FAO, Input suppliers, local authorities

Users

Private companies, Local service providers/ consultants/trainers, Company employees/staff members and interested people, Involved internal IFC and/or other World Bank Group staff members/teams/projects/ stakeholders.

https://vietnamnews.vn/society/1651577/viet-nam-faces-dual-challenges-of-micronutrient-deficiencies-malnutrition.html
https://vietnamnews.vn/society/1651706/global-cooperation-key-to-addressing-malnutrition.html

MC Mühlenchemie

Greta Reers
greers@muehlenchemie.com

Overview of our LSFF work

Focus geographies
KN, MY, VN, NG, SA, TZ, ET, ID, BD, PK
among others

MC Mühlenchemie is a global leader in the standardization, improvement, and fortification of flour. Our vision: Feeding the World – with Excellent Flour.

LSFF scope of work

We have been supporting the milling industry in the technical implementation of flour fortification for decades. Besides supplying mills with high-quality premixes, we support millers in gaining know-how on the technical implementation of fortification in the mill. We see it as our task to raise awareness of the importance of food fortification.

Current project:
We are founding partner of “Millers for Nutrition”, a cross-sector coalition established to celebrate, enable and encourage millers to fortify staple food correctly.

Millers for Nutrition

Top 3 objectives

I. Contribute to the global fight against malnutrition and “hidden hunger” through flour enrichment with micronutrients.

II. Enable mills in their role as LSFF implementers through technical assistance (TA) and knowledge transfer.

III. Ensure product quality, by supplying high quality micronutrient premixes according to national standards and beyond.

Challenges and gaps

I. Business case for millers: insufficient incentive structures to fortify, cost pressure leads non-compliance, the purchase of inferior premixes, etc.

II. Availability of efficient testing equipment/ solutions: insufficient at mills and at monitoring bodies.

III. Compliance with existing standards (resulting from to i) and ii): Unsatisfying adherence due to lack of incentives as well as lack of quality assurance and quality control (QA/QC) mechanisms.

Coordination areas

I. Enablement and continuous support of staple food producers by the entire ecosystem due to their decisive role in the value chain.
II. Long-term mechanisms/structures for better compliance (fortification of staple foods based on national standards must become the "new normal").
III. Overarching data collection structures for mapping the status of LSFF in all its areas (micronutrient deficiencies, markets, compliance, etc.).

MedAccess
Healthier Markets. Healthier Lives.

Mayank Anand, Health Markets Vice President: manand@medaccess.org
Mythili Sutharson, Health Markets Associate: msutharson@medaccess.org

Overview of our LSFF work

Anchor markets: NG, KE, ET, TZ, PK, ID, BD
Other markets in Sub-Saharan Africa; South Asia

*Active in LSFF since **2023***

LSFF scope of work

- MedAccess is a not-for-profit that finances agreements to improve access to medical products. One of the financial products that supports in delivering this objective is a volume guarantee (VG).
- A VG aims to reduce manufacturer's risk of low sales volumes where market demand is uncertain and in exchange, manufacturers offer affordable prices and provide stable supply commitments.
- Supply of vitamin A represents a key stumbling block in scaling LSFF. While supply is already unreliable, demand-side interventions help drive rapid demand growth that may soon outstrip current supply capacity.
- MedAccess is evaluating the suitability of using innovative financing for vitamin A manufacturers to improve supply and meet the growth demand in the future.
-

Top objectives

Evaluate and scope the use of innovative financing that can enable suppliers of vitamin A to improve availability and price stability of vitamin A

Gaps to close

I. Understand the demand-side dynamics for the vitamin A market, particularly focusing on the motivations and challenges faced by millers in complying with fortification regulations.

II. Understand financial and operational risks experienced by millers, distributors and suppliers to scale LSFF programmes.

III. Test the suitability of deploying innovative financing to shape the market for vitamin A.

Coordination areas

(to ensure a more efficient LSFF ecosystem)

- Market visibility and transparency to secure affordable/ high-quality micronutrients and pre-mixes.
- Knowledge sharing amongst millers to address challenges experienced in sourcing LSFF.

Partners in Food Solutions (PFS)

Christian Dedzo
christian@partnersinfoodsolutions.com

Overview of our LSFF work

Focus geographies
Nigeria

PFS is working to strengthen food security, improve nutrition and increase economic development across Africa

LSFF scope of work

PFS is part of P4P and will equip 6 rice mills in Nigeria over a two year pilot to blend Fortified Rice Kernels (FRKs) supplied by dsm-firmenich with local rice, then deliver this fortified rice to school children through SSNPs via WFP and GAIN.

Our interest & contribution to food fortification

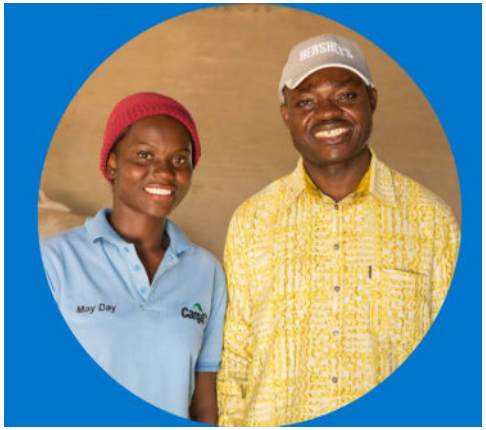
Our interest is to improve nutrition in Africa and our contribution is to provide technical know-how by working with the rice millers to fortify the rice for distribution to schools enrolled in the Nigerian Government's school feeding program.

Top 3 objectives

I. To equip the rice millers with technical know-how on rice fortification so that they can produce fortified rice to meet international standards.
II. To equip the rice millers with technical resources e.g. laboratory testing practices for in-house testing of fortified rice.
III. To support the rice millers implement QA/QC systems to be able to produce fortified rice to comply with regulatory standards.

Challenges and gaps

NO CHALLENGES YET SINCE WE ARE YET TO START OUR PROJECT.



Coordination areas

Transparency and effective communication between all partners involved in LSFF to align with roles and responsibilities of each partner so as to avoid duplication of activities and waste of resources.

Piramal Nutrition Solutions

Mahima Singh, Swapnil Wani
Mahima.singh@piramal.com

Overview of our LSFF work

Focus geographies
IN, BD, ID, Africa

Serving people, our customers, community, employees, partners and stakeholders by putting their needs and well-being.
*Active in LSFF since **2021.***

LSFF scope of work

Promote oil fortification nationally through various technical aid programs.

Work with partner agencies by engaging more of packaged oil companies in the M4N Coalition and introducing an MFI.

Implement packaging customization/ innovation for Vitamin A and capacity-building initiatives for millers.

Our primary emphasis lies in offering comprehensive technical aid, spanning from conceptualization to commercialization in staple fortification.

With a continued focus on oil fortification, we are providing trainings, on technical forums/ panels for rice fortification, customer sampling.

Top 3 objectives

I. Revitalize national focus on oil fortification through different forums.
II. Endorsing the premix association formation.
III. Enabling small and medium millers, via sector wide training and technical assistance.
IV. Support agency initiatives on creating fortification incentives, based on landscape assessment.

Challenges and gaps

I. Oil fortification area is a key focus but the market is quite fragmented, multiple players, low compliance and absence of government mandate adds to low/ slow adoption also.

II. Engaging millers and non-users of fortification premixes is challenging due to low incentive and motivation with respect to margins.

Coordination areas

I. Implementing robust systems for monitoring fortification efforts and evaluating their impact.

II. Strengthening partnerships between government agencies, NGOs, and private sectors.

Rice Millers Association of Nigeria (RIMAN) (1/2)

Peter Dama
peterdama56@gmail.com

Overview of our LSFF work

Focus geographies
Nigeria

RIMAN: advocacy for adequate enabling environment and promoting access to finance for the production of high quality nutritious rice.

Actively involved in and mobilizing all RIMAN's members involvement/ buy-in on the Nigerian Government's rice fortification agenda.

LSFF scope of work

RIMAN is committed to supporting the government of Nigeria to eradicate all forms of malnutrition, especially micronutrients malnutrition.

Top 3 objectives

I. RIMAN aims to build its members capacity and provide linkages to technological support to produce high quality rice to tackle hunger and ensure self sufficiency in rice production in Nigeria.
II. Support the government of Nigeria to set adequate standards and formulate appropriate policy favourable for easy transition of its members to the production of fortified rice.
III. Advocate for incentives, technological transfers and support for its members to commence production of high quality fortified rice and make it accessible and affordable for all.

Challenges and gaps

I. Lack of in-country capacity for rice fortification equipment fabrication.
II. Inadequate access to low interest (single digit) financing/grants to support RIMAN's members in uptaking production of fortified rice.
III. Poor agricultural practices culminating in scarcity of paddy.

Coordination areas

I. Driving synergy amongst government agencies and development partners for coordinated rice fortification programmes through the National Rice Fortification Central Coordinating Committee.
II. Mobilize members and serve as a gateway for engagement with members to ensure proper coordination.
III. Engagement with Government on key policies and regulation that directly impact on the rice sector.

Supported the Formulation of the National Code of Practice for Milled Fortified Rice - RIMAN (2/2)

Peter Dama
peterdama56@gmail.com

Contribution to LSFF outcomes

Advocate for and mobilize members' involvement in the rice fortification agenda in Nigeria.

Involved in the formulation of the National Code of Practice for Milled Fortified Rice to guide the voluntary fortification of rice.

Results achieved

I. Stimulated all RIMAN's members support for rice fortification.

II. Supported the development of a national code of practice for milled fortified rice.

III. Onboarded of a member of the alliance as one of the very few rice fortification pilot mills in Nigeria.

Theory of change

Activities:
Mobilize support for Rice Millers and advocate for the creation of favourable enabling environment

Results:
Self sufficiency in production of fortified rice and rice fortification inputs

Impacts:
Control/Eradicate Micronutrient Malnutrition in Nigeria

Collaboration in our LSFF work "Circle of friends"

Partners

GAIN, WFP, Federal Government of Nigeria, TNS, GIZ, BMGF

Users

More than 50% of Nigerian population that consume rice

SAID SALIM BAKHRESA & Co LTD

IDDI Mvungi
DAR ES SALAAM ,TANZANIA

Overview of your LSFF work

Focus geographies
Tanzania

*Active in LSFF since **2013***

LSFF scope of work

SS Bakhresa started fortifying wheat flour with Iron, Zinc, B12 and Folate since 2013.

Interest & contribution

Consistently addition of iron and minerals to wheat flour and distribution to the vulnerables without transferring the cost of fortification to the final product.

Top 3 objectives

I. Delivering the fortified flour to the community to address the prevalence micronutrient deficiencies
II. To comply with Tanzania fortification legal requirements
III. To ensure cost effective fortification and distribution processes so that the fortified products are accessible and affordable by all population including the vulnerable groups

Challenges and gaps

I. Inconsistencies of the premix quality among the suppliers
II. Expensive monitoring facilities i.e. Analysing the vitamins and some minerals
III. Low awareness of the community to value and increase demand to the fortified products

Coordination areas

I. Premix &Product Analysis and Monitoring
II. Data Management systems
III. HACCP & GMP Training

SANKU (1/2)

Felix Brooks-church
fbrookschurch@sanku.com

Overview of our LSFF work

Focus geographies:
KE, TZ, ET

Sanku is a non-profit social enterprise on a mission to end malnutrition in Africa

LSFF scope of work

Sanku works with Governments and partners to design, implement, scale, and monitor effective food fortification programs. Using smart technology and an innovative business model, Sanku partners with small and medium level millers to support them in fortifying their flour affordably.

Sanku's IoT Dosifier was specifically designed for small and medium mills and provides accountability through remote monitoring providing real-time data. Sanku provides the Dosifiers and nutrient premix to small and medium level millers (who feed between 50% to 95% of the population in East Africa). Our work is supported by a cost-neutralizing model to incentivize millers to comply and ultimately to address gaps in national fortification programs.

Top 3 objectives

I. Enhanced Premix Access: Establish a premix blending facility in East Africa to provide millers with affordable, quality premix, ensuring widespread, nutrient-rich flour availability.
II. Scale Innovative Fortification Technology: expand the reach of our innovative IoT-enabled Dosifier technology with effective remote monitoring feature to allow for the precise and cost-effective fortification of staple foods at milling operations.
III. Sustain and Expand Partnerships for Broader Impact: sustain and grow our network of partnerships with governments, NGOs, the private sector, and communities to scale fortification efforts.

Challenges and gaps

I. Limited enforcement of fortification standards leads to reliance on millers' goodwill for adherence and a lack of demand creation despite the presence of monitoring technology.
II. Supply Chain disruptions leading to variability in the supply chain of vital nutrients.
III. Scaling to new markets with intricate and varied regulatory landscapes poses challenges, sometimes causing delays in implementation and impacting the speed and efficiency of scaling efforts.

Lydiah Nyaga, one of Sanku's Kenyan partner millers. She has been running her own mill in Eastern Kenya since 2017. Trained as a nurse, Lydiah is a passionate advocate of fortified food in her community.

Coordination areas

- Harmonization of regulations
- Enhancing technical expertise
- Integrating supply chains
- Robust monitoring and public awareness to ensure essential nutrients reach those who need them
- Studies and research on the success and impact of our work
- Access to new donor networks to further invest in scaling fortification regionally.

Fortification of Staple Food in East Africa - SANKU (2/2)

Felix Brooks-church
fbrookschurch@sanku.com

Contribution to LSFF outcomes

I. Nutrient-Rich Diets: Sanku champions better health by fortifying staple foods with vital nutrients to combat micronutrient deficiencies and elevate the nutritional value of staple diets.
II. Ending Malnutrition in Africa: Embracing LSFF's vision, Sanku's strategic fortification of staple foods is a significant driver against malnutrition.
III. Evidence-Based Impact: Aligned with LSFF's resolution, Sanku's data-driven approach underpins global commitments, underscoring our pivotal role to enhance health and well-being through fortified nutrition

Results achieved

I. Miller recruitment: Sanku has onboarded and enabled over 1000 millers into our portfolio, looking to double this figure in the next 3 years.
II. Compliance and Transparency: Sanku's IoT Dosifier monitors fortification and transmits real-time data crucial in assessing the success of fortification.
III. With over a decade in food fortification in East Africa, Sanku brings insight to reaching flour millers serving most of the populations where they work, and has closed the gap in fortification to reach over 10 million people across east Africa.

Theory of change

At Sanku, we're dedicated to ending malnutrition in Africa by ensuring 100 million people have access to fortified flour by 2030, utilizing innovative technology and empowering local millers to sustainably produce nutrient-rich staple foods.

End malnutrition and hidden hunger in Africa by closing the fortification gap **and reaching 100 million people with fortified flour by 2030.**

- Increased consumption of fortified flour results in improved micronutrient status among vulnerable populations **including children.**
- A business model that is scalable and sustainable, guaranteeing that every meal for every mother and child **contains lifesaving nutrients.**

- **Adoption of fortified flour** among vulnerable populations.
- **SME millers** to produce quality fortified flour.

Technology, Value Chain, Evidence, Capacity

See our most recent impact report here.

Collaboration in our LSFF work "Circle of friends"

Partners

- Governments and millers in KE, TZ and ET,
- Millers for Nutrition, Miller Associations (GMOA in Kenya),
- WFP
- Nutrition International, GAIN, Technoserve, WVI, BMGF
- Academia (JKUAT in Kenya),
- Commercial partners (DSM, MC)

Users

The immediate users of Sanku's products are the over 1100 partner millers in KE and TZ. They receive our fortification equipment (Dosifier), and purchase empty flour bags and nutrient premix from Sanku at a fair market rate. Households in KE and TZ are last-mile consumers of fortified flour.

Sight and Life Foundation (1/2)

Kalpana Beesabathuni
Kalpana.beesabathuni@sightandlife.org

Overview of our LSFF work

Focus geographies
India, Rwanda, Nigeria, Ethiopia, Ghana, Kenya

We are a global nutrition organization focused on alleviating malnutrition in women & children
*Active in LSFF since **2006***

LSFF scope of work

We are a global nutrition organization focused on advancing product, technology & business model innovations in fortification; building local entrepreneurship, and capacity of public sector programs.

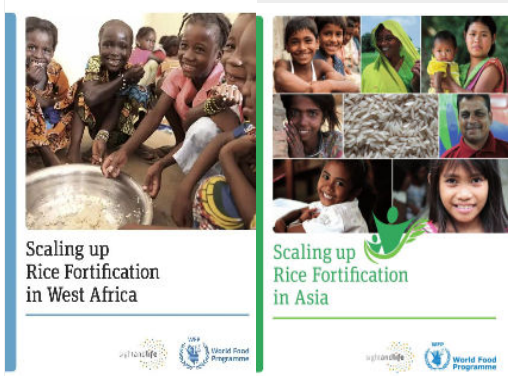
Key projects:

Product & Technology Innovations in Fortification

SUN Business Network, Rwanda

Top 3 objectives

I. **Product and Technology Innovations** to make LSFF affordable, and scalable with assured quality
II. **Advocacy** to promote local entrepreneurship and capacity building
III. **Technical Assistance** to implementing organizations in the countries: widely sharing of knowledge through publications in digestible formats and toolkits



Challenges and gaps

I. High initial costs for research and development, potential resistance to innovations, and ensuring consistent quality across different production environments.
II. Difficulty in aligning the interests of various stakeholders, ensuring standards are adopted and consistently enforced, coordination and collaboration needed to ensure there are economies of scale in production and significant upfront costs and efforts for new entrants.

Coordination areas

I. Co-ordination among all members in the LSFF community
II. Standardizing key elements in the value chain to achieve economies of scale

Sight and Life Foundation (2/2)

Kalpana Beesabathuni
Kalpana.beesabathuni@sightandlife.org

Contribution to LSFF outcomes

India: In collaboration with Tata Trusts and the state govt of AP, we instituted a promising, first-ever, cost-effective blending process, continuous blending, for a large-scale government program in rice fortification. The continuous blending technology model has led to a significant drop in the expenditure to produce fortified rice and, consequently, reduced the burden on the government exchequer.

Rwanda: Technical partner to the govt in mandatory food fortification standards; supported the process of passing new food fortification regulations making it mandatory for all locally and imported food products among the five food staples.

Partnerships: Since 2007, provided the WFP-SAL-DSM partnership with research projects, scientific expertise and advocacy, toolkits, publications, communication, and capacity building. The partnership improved diets of tens of millions.

Results achieved

Innovation: Advancing a game-changing climate-smart innovation in fortified flour by removing anti-nutritional factors that inhibit absorption of minerals such as iron, zinc, and achieving upto 25% in cost savings for the millers. Product development in advanced stage in India and Nigeria. Built a strong R&D network in the two countries to support testing and product development.

Theory of Change

Goal: To **scale up** LSFF globally
Strategy: **Partnering** with various stakeholders to design and advance **cost-effective** product and technology **innovations**.
Actions:
Innovation: Develop and refine fortification products & technologies that are **affordable** and **scalable**.
Public Sector Support: Provide research, advocacy, and **expertise** to inform and shape regulations and programs
Capacity Building: Enhance the skills and knowledge of partners to effectively implement fortification initiatives.
Expected Results:
Short-term: **Increased adoption** of fortification technologies and practices.
Medium-term: **Improved regulatory** environments and **stronger partnerships.**
Long-term: **Better public health outcomes** through enhanced nutrition.

Collaboration in our LSFF work "Circle of friends"

Partners

Collaborate across the LSFF community and local governments in India, Rwanda, Ethiopia, Nigeria. Key partners: WFP, DSM, several members in LSFF community

Users

Food companies for improving quality of fortification, scaling up or making fortification affordable.

Governments and implementing partners to improve the fortification programs.

i) https://www.tatatrusts.org/our-stories/article/staple-security; ii) https://www.sightandlife.org/resource-hub/magazine/scaling-up-rice-fortification-in-west-africa
iii) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8066912/; iv)https://sightandlife.org/wp-content/uploads/2017/02/SAL_WFP_Suppl.pdf

TechnoServe (1/3)

Dominic Schofield | dschofield@tns.org
Brent Wibberley | bwibberley@tns.org
Rizwan Yusufali | ryusufali@tns.org

Overview of our LSFF work

Focus geographies
IGNITE – (BD, ET, ID, IN, KE, NG, PK, TZ)
USAID AFFORD (Pipeline MG, ZM, WA Region)

TechnoServe is a leader in developing and diversifying food processing capacity and catalyzing investment in food systems.

LSFF scope of work

- **Strategic partnerships**: Over 12 years, we've cultivated key alliances with businesses, governments and regulatory bodies to promote industry-wide efforts for food processing and fortification advancement.
- **Scaling fortification for nutrition**: TechnoServe spearheads LSFF initiatives, prioritizing processors and employing a business-centric model.
- **Processor-centric sustainability:** Placing processors at the forefront, we stimulate market growth, job creation, and food safety.
- **Sustainable business models:** ensure lasting impact across the value chain.

Key objectives

I. Leverage food processing expertise for plant design, line optimization, and product development support.

II. Enhance compliance with fortification standards.

III. Foster public-private partnerships and convene discussions to drive collaboration.

IV. Address skill gaps and scale operations for growth, integrating entrepreneurship and access to finance programs.

Challenges and gaps

I. Decreased fortification interest in developing economies amid global economic and geopolitical challenges.

II. Limited private sector engagement in fortification programs by governments and development sector, lacking understanding of business environments.

III. Low interest and trust from local millers.

IV. Supply chain challenges for certain vitamins and premixes, coupled with inadequate demand for quality premixes.

Coordination areas

Coordination landscape:

- Unusually competitive environment.
- Sustaining interest and engagement among busy stakeholders.

National - Regional - Global Disconnect:

- Movement towards consolidation of networks.
- Current networks lack accountability, planning.

The missing private sector

- Significant concerns about conflict-of-interest.
- Platforms lack the skills to effectively engage private sector.

Inspiring Good Nutrition Initiatives Through Entreprise (IGNITE) (2/3)

Rizwan Yusufali | ryusufali@tns.org
Tobi Durotoye | tdurotoye@tns.org

Contribution to LSFF outcomes

IGNITE empowers millers in eight countries to fortify staple foods, expanding a sustainable model through the M4N coalition. It enhances fortification practices for widespread nutritional impact.

I. Partnerships enhance millers' efforts, delivering tailored local TA services.
II. Data empowers millers to improve fortification practices and business performance.
III. Provide tools, foster consensus, support partners in advocacy efforts.
IV. M4N analyzes women's engagement, informing empowerment strategies.

Results achieved

I. Engaged country stakeholders, conducted motivational convenings, and completed TA recipient identification and segmentation.
II. Tested TA workshop machinery, including Sector Wide Trainings and High-level convenings, and established operational core B2B and Technical Assistance matchmaking.
III. Deployed integrated digital backbone for stakeholder engagement, resource provision, tracking, and analysis.

Theory of action

IF..
millers are enabled by receiving high quality, responsive technical assistance and product quality testing support as needed,
AND ..
millers are celebrated and encouraged with commitments to FF excellence, increased industry voice and ownership of the FF agenda, and good performance of millers are recognized and promoted, and
AND ..
SFPs are motivated to engage in collective impact with enhanced incentives for global SFP engagement with demonstrated business cases, and mutual governance and accountability mechanisms adopted,
THEN,
There will be improved fortification performance among the supported millers and improved engagement of women, with adequate fortification of (fortifiable) staple foods by millers who account for 85% market share of these foods.

Collaboration in our LSFF work "Circle of friends"

Technical partners across the value chain, regional and global:

BASF, dsm-firmenich, Hexagon Nutrition, MC Mühlenchemie, Piramal, Sternvitamin, BioAnalyt, Sanku

The program intends to include more technical and ecosystem partners.

Users

Millers are at the heart of our coalition, investing in good fortification practices at local, national and global level.

This project generously funded by the Bill & Melinda Gates Foundation, the core delivery platform "Millers for Nutrition" is supported by founding Strategic Fortification Partners and powered by TechnoServe. The contents are the responsibility of TechnoServe and do not necessarily reflect the views of BMGF or the Strategic Fortification Partners.

USAID Advancing Food Fortification Opportunities to Reinforce Diets (USAID AFFORD) (3/3)

Brent Wibberley | bwibberley@tns.org
Gwyneth Cotes | gcotes@tns.org

Contribution to LSFF outcomes

USAID AFFORD seeks to reduce micronutrient inadequacies through mandatory LSFF of staple foods and condiments.

I. Strengthen enabling environment through the public sector.
II. Expand and sustain LSFF through private sector engagement.
III. Strengthen LSFF effectiveness and increased public and private sector accountability through civil society engagement.
IV. Mobilize global commitment, leadership, and investment in support of LSFF.

Results achieved

- Building upon past partner efforts to develop a comprehensive LSFF assessment toolkit (in-progress).
- LSFF opportunities assessments to inform USAID investments in Senegal, Haiti, Madagascar, Zambia, and West Africa region.
- Technical assistance to salt sector / support rollout of the national fortification strategy (Madagascar, in progress).
- Fill technical and advocacy gaps: development of a rapid zinc spot test, systematic review of LSFF and economic outcomes (in progress).

Theory of action

IF WE…
-Strengthen the LSFF enabling environment through the **public sector (IR1)**;
-Expand and sustain LSFF interventions through **private sector (IR2)** engagement;
-Strengthen the effectiveness of LSFF interventions and increase public and private sector accountability through **civil society (IR3)** engagement; and
-Mobilize **global (IR4)** commitment, leadership, and investment in support of LSFF
THEN…
We will create a motivated, capacitated, and sustainable food fortification system
THAT WILL…
Safely and sustainably reduce micronutrient inadequacies and improve diets, particularly for women and children, via LSFF of staple foods and condiments.

This project overview is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of TechnoServe and do not necessarily reflect the views of USAID or the United States Government.

Collaboration in our LSFF work "Circle of friends"

USAID AFFORD consortium

- TechnoServe is the project prime and leads the project with a whole of business approach.
- Food Fortification Initiative supports the project's knowledge management efforts.
- ISF Advisors leads access to finance efforts.
- Nutrition International supports enabling environment efforts.

Users

Private sector stakeholders is a primary audience, but we also engage government and civil society to improve LSFF programs and collaborate with the broader LSFF community in all efforts.

Wakene Food Complex

Muluneh Lema
mulunehlema95@gmail.com

Overview of our LSFF work

Focus geographies
Ethiopia

Large scale mill with fortification capacity to meet a sizable market share and benefit the community.
*Active in LSFF since **2022***

LSFF scope of work

Interest & contribution to food fortification

Ensure that the population is consuming adequately fortified food to end the challenges linked with the hidden hungers that are plaguing the community.

Top Objectives

I. Produce high quality wheat flour that is in compliance with mandatory national standards. Develop a long term procurement strategy to maintain sustained access to high quality premix.
II. We intend support the regulatory authorities to enforce the newly introduced fortification requirements.

Challenges and gaps

I. There is a major challenge with access to quality premix. Some products in the current market are not from reputable organizations and lack the necessary quality documentations.
II. The cost implication tied to learning exercises are a major deterrent for millers to engage and commit to improving their technical capacity.
III. Due to premix being an imported input, there is great concern for access to necessary volumes of premix. Adding the fact that there is a critical shortage of FOREX, millers will not be able to import the necessary amount of premix required for their respective mills.
IV. There is a lack of local technical capacity both in the industry and the public sector. There is little to no knowledge on requirements for adequate fortification for millers and regulatory authorities.

Coordination areas

I. Greater support for regulatory authorities to promote and champion fortification as critical solution to end the hidden hunger
II. Create opportunities for real-time learning exercise for millers from global champions in LSFF.
III. Promote and incentivise input providers to avail products in local currency and remove the currency challenges.

Public sector

Workstream

Creating a level playing field by technical standardization and regulation of LSFF and ensuring LSFF is steered towards sustained relevant coverage and reduction of VMD prevalence by effective integration into wider food and nutrition security policies, together with advocacy instruments.

Index

European Institute for Food Law

European Institute for Food Law (1/2)

Bernd van der Meulen / Lisanne Kramer
Bernd.vanderMeulen@food-law.nl
With: Aishani Gupta and Edefe Ojomo

Overview of our LSFF work

Focus geographies
Global; Regional (EU; ECOWAS); US, IN, NG, ET

Research and program support to guide stakeholders in LSFF on key compliance issues.

LSFF scope of work

Research on legal and regulatory requirements in the food sector.

Development of a regulatory roadmap for the introduction of innovative products for LSFF.

There is great potential in food fortification to make efficient and effective contributions to improving health status. We are aware that procedures and bureaucracy may stifle needed innovations. We provide the instruments to deal with such challenges.

www.food-law.nl
www.BerndvanderMeulen.eu

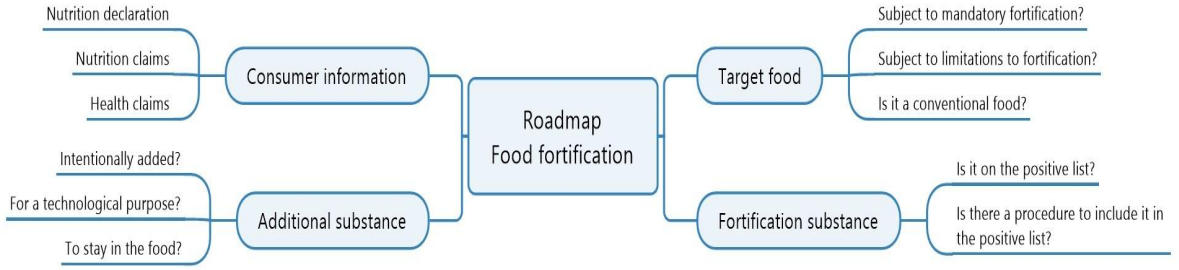
Top 3 objectives

The overall objective is to enhance regulatory agility. This is the skill to overcome legal and regulatory challenges and to benefit from legal and regulatory opportunities – in this case regarding LSFF

I. Generate the knowledge that is needed
II. Make the knowledge accessible for stakeholders
III. Keep the information up to date

Challenges and gaps

I. Lack of transparency and clarity on regulatory requirements in some jurisdictions make compliance difficult for stakeholders
II. Frequent changes in legal and regulatory requirements may cause uncertainty for stakeholder
III. Dissimilarities in legal and regulatory requirements across jurisdictions complicate compliance for stakeholders working in different jurisdictions



Coordination areas

We do not aim at changing the LSFF ecosystem but at being able to map it and provide a framework for engaging with it as it is. To this end critical coordination areas include

I. Access to the relevant regulatory instruments for stakeholders
II. Access to information on best practices in regulatory procedures
III. Access to institutional information on the relevant regulatory authorities

European Institute for Food Law

R&D Regulatory Roadmap Project (2/2)

Bernd van der Meulen
Bernd.vanderMeulen@food-law.nl

Contribution to LSFF outcomes

R&D LSFF projects:

I. Early warning: awareness of potential regulatory issues before these may negatively affect the R&D projects in LSFF
II. Empowerment: LSFF R&D projects can deal with regulatory issues effectively and efficiently

Results to be achieved

Our project is in a very early stage of development. We aim to contribute to overcoming regulatory hurdles.

I. By providing an instrument for self-assessment (roadmap)
II. By indicating possible pathways towards realisation
III. By providing support

Theory of action

We are developing a regulatory roadmap to guide the work of researchers and other stakeholders (regulators, food processors, etc.) on the requirements for introducing new products and processes in food production and fortification.

We will do this by

Mapping the relevant regulatory authorities: **WHO** will stakeholders have to engage with?

Compiling a comprehensive portfolio of the regulatory instruments that govern all the relevant actions involved in a particular process: **WHAT** do stakeholders need to know?

Tracking the necessary actions for compliance with regulations: **HOW** can stakeholders ensure that their actions are in compliance with the regulatory requirements?

We do not aim to improve the legal and regulatory infrastructure in target countries, but to create understanding of the requirements as they are and the skills to deal with them.

Collaboration in our LSFF work "Circle of friends"

Partners

European Institute for Food Law, Edefe Ojomo and Aishani Gupta are key partners.

Currently working towards collaborations with the OECD, Reimagine Europe, TGI, ATNI and others involved in R&D LSFF projects

Users

R&D researchers on LSFF and food related projects.

We will provide a roadmap researchers and food processors can use to better understand regulation that may be applicable to their projects and products.

Federal Competition and Consumer Protection Commission (FCCPC) (1/2)

FCCPC Team/Nkechi Mba
nkechi.mba@fccpc.gov.ng

Overview of FCCPC-LSFF work

Focus geographies
Nigeria

*The FCCPC has been participating in food fortification programs since **2013.***

LSFF scope of work

The FCCPC-LSFF scope of work includes making inputs to development of standards, code of practices, public awareness, stakeholder engagement, monitoring at household level and input to digital Digital Fortification and Quality Traceability Plus (DFQT+) system.

FCCPC's interest/contribution in food fortification:

The improvement of the nutrition and health outcomes for Nigerian consumers is key, as well as ensuring that consumers get value for money spent on purchasing fortified foods and products.

List of projects:

i. Input to DFQT+ system for vitamin A

ii. Advocacy/Public awareness of fortified foods.

Top 3 objectives

I. Ensure compliance to standard of food fortification at household level.
II. Consumer sensitization on benefits of fortified foods.
III. Provider awareness of food fortification

Challenges and gaps

I. Logistics for household monitoring of food fortification.
II. Logistics for massive sensitization.
III. Inadequate stakeholder engagements.
IV. Lack of data at household level.

Coordination areas

I. Proper synergy between stakeholders.
II. Implementation of multiple initiatives to drive fortification compliance.
III. Increased awareness creation and sensitization.

FCCPC hosts GAIN as the Digital Fortification and Quality Traceability Plus (DFQT+) is introduced to the Commission in Abuja, Nigeria

Launch of Rice Fortification in Abuja, Nigeria

Input to DQAQC system for vitamin A - FCCPC (2/2)

FCCPC Team/Nkechi Mba
nkechi.mba@fccpc.gov.ng

Contribution to LSFF outcomes

Ensuring that consumers get fortified food within the required standard at household level.

Results achieved

The FCCPC's contributions to LSFF, so far, is commendable because FCCPC hosted GAIN when it came to introduce DFQT+ to the management and staff of the Commission.

The areas where FCCPC can be uniquely placed to contribute to LSFF success include:

I. Data collection of FF at the household level.
II. Education and enlightenment of consumers on the importance of fortified food.

Theory of change

Results of the activities:

I. Increased awareness and enlightenment of consumers to accept fortified products because of its benefits.
II. Utilizing digital systems to strengthen industry performance.
III. Commercialization of biofortified crops that are approved by the relevant authorities.

Collaboration in our LSFF work "Circle of friends"

Partners

The FCCPC collaborates with GAIN on DFQT+ project

Users

- The users of DFQT+ outputs are the regulatory agencies.
- The users of the products are consumers for the health benefits.
- Through regulatory work, the industries/manufacturers shall be compelled to comply with the prevailing standards.

Food Fortification Initiative (FFI) (1/2)

Scott Montgomery (sjmontgom@gmail.com)
Helena Pachón (helena.pachon@emory.edu)

Overview of our LSFF work

Focus geographies
Global

FFI champions effective fortification of industrially milled cereal grains globally through multi-sector partnerships. Active in LSFF since 2002.

LSFF scope of work

FFI supports global, regional, and national partners from public, private, and civic sectors to plan, implement, and monitor LSFF. Our work includes data and knowledge generation, providing technical assistance (TA) and advocacy.

FFI's vision is smarter, stronger, healthier people worldwide by improving vitamin and mineral nutrition. Our core value is public-private-civic partnerships. Every sector should be included throughout the fortification process as every group's expertise is needed for successful programs.

Activities: TA to plan, implement, and monitor LSFF; ensuring accountability; advocacy; coordination; knowledge generation; strategic assessments, capacity building.

Top 3 objectives

I. Analyze the entire supply chain and food systems landscape to discover and act on opportunities in geographies with a demonstrated need for LSFF and the potential to make a positive impact on health through LSFF.
II. Support the creation of mandatory legislation for LSFF through evidence generation, advocacy, and technical support so that LSFF programs are country-led and self-sustaining.
III. Hold countries accountable to LSFF commitments by providing technical assistance to strengthen monitoring capacity and documenting/ reporting on annual progress.


Making fortified baladi bread in Egypt. (FAO/Jordi Vaque)

Challenges and gaps

I. **Resources:** scarce time and financial resources for country-level public, private, and civic partners to dedicate to LSFF, limited funding in LSFF partner community.
II. **Enabling environment:** lack of regulatory enforcement and industry compliance, competing government priorities.
III. **Misinformation, disinformation, and data:** lack of understanding/awareness of LSFF among the general population, pseudoscientific articles that make false conclusions about LSFF and influence stakeholder decision-making, lack of transparency among partners, lack of national-level impact and/or micronutrient data that stakeholders require to move forward with decisions.

Coordination areas

I. Coordination among multisector LSFF partners, making sure they are brought into the LSFF process early.
II. Coordination among LSFF partners, increasing transparent communication and knowledge/ resource sharing.
III. Coordination among regional inter-governmental groups and national fortification alliances.

Food Fortification Initiative
Enhancing Grains for Healthier Lives

Scaling up large-scale cereal grain fortification globally (2/2)

Scott Montgomery (sjmontgom@gmail.com)
Helena Pachón (helena.pachon@emory.edu)

Contribution to LSFF outcomes

I. **Accountability:** Have published annual estimates of LSFF progress for more than 195 countries through FFI country profiles (since 2004) and the Global Fortification Data Exchange.
II. **Advocacy:** Advocated for LSFF to be included in the 2023 WHA Resolution on LSFF, provided expertise/input on WHO LSFF recommendations and guidance, long-time advocate for the revision of India's fortification standards to be in line with WHO recommendations, informs LSFF actors on using data and insights through GFDx.
III. **Coordination:** Brings together public, private, and civic partners in 35+ countries to advocate for, plan, implement, and monitor LSFF; held workshops to harmonize national LSFF standards with regional guidance in Eastern and Southern Africa, Central Asia/Eastern Europe; engaged civil society to strengthen industry compliance to LSFF standards in Uganda and Malawi.
IV. **Knowledge generation:** FFI resources, scientific articles, etc. cited by 980+ documents since 2018; literature review of evidence on the impact of LSFF for 10 common fortification vehicles.
V. **Social protection programs and LSFF:** Developed a new model for scaling up whole wheat flour fortification through social protection programs (PDS, ICDS, and PM POSHAN) in India at no cost to beneficiaries or gov. that is proven to reduce MN deficiencies; worked to fortify gov. subsidized baladi bread in Egypt.
VI. **Reach:** Supported programs that reached over 1.4 billion people in 2023.

Results achieved

I. Completed and regularly updates of data-driven **strategic assessments** (supply chain analyses, landscape analyses, cost-benefit analyses, feasibility assessments, etc.) for regions (7) and countries (150+) around the world.
II. Created and delivered **capacity building trainings** in cereal grain fortification topics that are integrated into milling schools' curricula worldwide, delivered at regional and national workshops, and conducted online.
III. Supported 20+ countries since 2002 to **create mandatory legislation for LSFF** in alignment with best practices and WHO recommendations.
IV. LSFF actors from 193 countries have visited the **GFDx database** to date and 165 publications have cited GFDx, including high-impact publications (GNR, WHA resolution, WHO guidelines, Food Systems Dashboard).

Collaboration in our LSFF work "Circle of friends"

Partners

Executive Management Team: ADM, Ardent Mills, Cargill, Emory University, GAIN, IAOM, IFSBH, NI, UNICEF, US CDC, WHO.
Other key partners: FAO, Fortify Health, GAPSBiF, IGN, MNF, Rockefeller Foundation, TNS, USAID, WFP, others in LSFF community, and public, private, and civic sector partners in each country where we work.

Users

FFI's technical assistance, knowledge generation, global estimates of LSFF, and trainings provide industry, gov., donors, implementers, and advocates with the tools they need to identify fortification opportunities, plan, implement, and monitor LSFF. Regional actors and national advisors use GFDx data and visualizations to inform and influence LSFF policies.

Further reading and resources can be found here.

Food Safety and Standards Authority of India (FSSAI) (1/2)

Overview of our LSFF work

Focus geographies
India

Active in LSFF since 2018
Apex Food Regulator of the country.

LSFF scope of work

- Regulations notified on fortified foods in 2018 [Double Fortified Salt, Wheat Flour, Rice, Milk and Oil] ; Amended in 2020 to include Cereals Products, Bakery Wares and Fruit Juices.
- Awareness generation amongst the public and Food Business Operators. Development of testing infrastructure to ensure quality assurance and control.
- Science based regulations/standards; awareness creation in public which will result in demands for fortified foods and Strengthening of Laboratory Network.

Top 3 objectives

I. Ensure availability of Fortified Staples in the open market.
II. Ensuring the quality of fortified products available in the market including food safety net programmes.
III. Use of IT / Digital Technology to strengthen the compliance by the FBOs manufacturing fortified and allied products.

FORTIFIED
SAMPOORNA POSHAN
SWASTH JEEVAN

Challenges and gaps

I. Testing: non availability of Rapid testing kits for on–the- spot checking.

II. Impact assessment of consumption of fortified products.

III. Myths / misconception amongst the consumer regarding fortified products.

Coordination areas

I. Greater convergence among the line ministries for awareness generation on fortified staples amongst the public.

II. Expanding the network of laboratories along.

III. Development of rapid testing kits.

Ms Inoshi Sharma, Executive Director.
Email: ed-office@fssai.gov.in

Food Safety and Standards Act, 2006 - FSSAI (2/2)

Ms Inoshi Sharma, Executive Director.
Email: ed-office@fssai.gov.in

Contribution to LSFF outcomes

Ensuring the quality of fortified products as per the Standards laid down under Food Safety and Standards Act, 2006.

Results achieved

I. Standards have been formulated for fortified products.

II. Methods for testing have been developed.

III. +F Logo has been developed for easy identification of fortified products by consumers.

Theory of change

Activities:

Multi-stakeholder engagement with Manufacturers, industry associations and e-commerce platforms for easy availability of fortified food items in the market.

Awareness generation among consumers on the benefits of fortified products.

Results (of the activities):

Availability of fortified products in the open market.

Better understanding of the benefits and acceptability of fortified products by consumers.

Impacts:

Better nutrition profile of the population.

Collaboration in our LSFF work "Circle of friends"

Partners

National level research organisations, various line ministries and departments at Centre and State level and Development Partners.

Users

Regulations, IT platform for traceability - Food Businesses
Testing mechanism – Laboratories
IEC and Labelling norms – Consumers

GIZ Global Programme "Food and Nutrition Security, Enhanced Resilience" (1/2)

Koffi Alouki, Neha Khara, Rike Riesmeier
Point of contact: rike.riesmeier@giz.de

Overview of our LSFF work

Focus geographies
BF and West Africa, IN, MG

Improving food security and nutrition, especially women of reproductive age and young children in 12 countries.
*Active in LSFF since **April 2023.***

LSFF scope of work

This project is implemented through a partnership between the Foundation and the German Federal Ministry for Economic Cooperation and Development (BMZ) to promote better nutrition, which embeds LSFF in a holistic strategy focusing on healthy, balanced, and nutritious diets.

Activities focus on capacity development for the public sector, including regulation, setting standards, promoting data and evidence-based decision making.

Top 3 objectives

I. Strengthening the capacity of the public sector and the policy environment in Burkina Faso and West Africa, India, and Madagascar.
II. Advising governments on how to implement existing LSFF policies more effectively, aligning them with scientific evidence and up-to-date data.
III. Monitoring quality standards.

Challenges and gaps

I. Governance of FF: institutional capacity gaps, implementation of existing policies, coordination between stakeholders.
II. Lack of data for decision-making, e.g. to select food vehicles for fortification, to better target the most vulnerable population groups and to improve the quality of fortified foods.
III. Inadequate quality control and assurance of fortified foods, alignment, harmonization and enforcement of standards and regulations.

Coordination areas

I. Governance: alignment between ministries and coherence of government policies and strategies.
II. Targeting: context-specific solutions to get fortified foods to those most in need
III. Harmonization of logo and labelling standards for transparent and aligned communication to retailers and consumers.
IV. Learning from successful approaches and strategies.

Capacity Development for LSFF in Burkina Faso and West Africa, India, and Madagascar - GIZ (2/2)

Koffi Alouki, Neha Khara, Rike Riesmeier
Point of contact: rike.riesmeier@giz.de

Contribution to LSFF outcomes

Burkina Faso: Strengthening of the National Fortification Alliance in its mandate to coordinate national food fortification activities, to improve compliance with standards and regulations, to implement the country's strategy to address micronutrient deficiencies, and to raise awareness of the national fortification logo and the benefits of a diverse diet.
West Africa: Support WAHO in identifying and sharing of learning experiences on LSFF from other ECOWAS countries for integration into national nutrition policies, the establishment of a regional fortification alliance, strengthening national fortification alliances in selected ECOWAS member states.
India: Support to the Government's nutrition program *Mission POSHAN 2.0,* improve the quality, coverage, and uptake of fortified rice in government social safety net programs, improve the delivery of governmental nutrition services, including the communication of a healthy diet.
Madagascar: Support the National Food Fortification Alliance in operationalising the country's food fortification strategy, improve the evidence base for LSFF programming, improve quality control of fortified sample foods.

Results achieved

I. Burkina Faso's Alliance Nationale pour la Fortificacion des Aliments (ANF) has been strengthened in its coordinating role, has resumed regular meetings and is taking the lead in key tasks such as the preparation of the national fortification strategy.
II. West Africa: first steps to establish a Regional Fortification Alliance have been undertaken.
III. India: an IT solution for quality control of social safety net programs including fortified foods has been piloted and will be scaled.
IV. Madagascar: a national micronutrient survey supported by the project is currently underway.

Theory of change

Objective: to strengthen the capacity of the public sector and policy environment in Burkina Faso and West Africa (through WAHO), India, and Madagascar to implement existing LSFF policies more effectively, to align them with scientific evidence and up-to-date data, and to embed LSFF within broader Food and Nutrition Security policies.
Outcomes: improved availability, access, and quality of fortified foods in the three countries. Consumer organizations are strengthened to better advocate for consumer needs, knowledge, and awareness of the target group regarding a micronutrient-rich diet and fortified foods are promoted.
Impact: reduce reservations of fortified products and increase demand and consumption.

Collaboration in our LSFF work "Circle of friends"

Partners

BF: Ministry of Health, National Fortification Alliance, West African Health Organization (WAHO), CRS, RESONUT
IN: Ministry of Women and Child Development, Jhpiego, Kaivalya Education Foundation, PATH
MG: National Nutrition Office (ONN), UNICEF, National FF Alliance, MIKASA

Users

Policy makers
Members of national food fortification alliances
Service providers for sensitization of the broader population

Program website: https://www.giz.de/en/worldwide/131583.html

GIZ Pakistan and BISP (1/2)

Dr. Franz von Roenne
franz.roenne@giz.de

Overview of our LSFF work

Focus geographies
Pakistan

'Nutrition is social protection!'

LSFF scope of work

Wheat flour is a ubiquitously effective vehicle for LSFF in Pakistan to reach all parts of the popula-tion including women of childbearing age, adoles-cent girls, and children.

LSFF target groups consume wheat from a variety of sources, including local produce, the market, subsidized commodities, and food rations. LSFF can only be effective if demand can be met through all supply chains, and when supply follows changing demand.

Effective demand-supply aligned LSFF requires supply-side measures for industrial and artisanal flour; the local market of subsidised and non-subsidised commodities to play an important role; the demand side to be addressed by education, targeted social protection measures and social behaviour change driven by consumers.

Top 3 objectives

I. Engage and empower adolescents, particularly adolescent girls to be active participants in the route to improved nutritional status

II. Increase the consumption of nutritious food and improve diet diversity

III. Provide supplementation to address micronutrient deficiencies

Challenges and gaps

I. **Socioeconomic disparities and gender bias:** Poverty, limited access to diverse foods, and unequal food distribution within families disproportionately impact adolescent girls

II. **Fragile supply chains and limited supplementation Adherence:** Difficulties in maintaining consistent delivery and proper storage of supplements can disrupt project effectiveness. Furthermore, lack of understanding of benefits and social stigma can hinder consistent use of supplements among adolescent girls

III. **Limited education and empowerment opportunities:** Low female literacy rates and social norms restricting girls' mobility can hinder their ability to participate in nutrition interventions and advocate for themselves

Coordination areas

I. Multi-sectoral collaboration at National and Sub-National Levels

II. Community engagement and empowerment

III. Private sector engagement, addressing the actors in the local market and food system

IV. Strengthening monitoring, evaluation, and data sharing

Leveraging Pakistan's Social Protection Programmes for Adolescent Girls' Nutrition – BISP/GIZ Pakistan (2/2)

Dr. Franz von Roenne
franz.roenne@giz.de

Contribution to LSFF outcomes

IFA distribution, awareness raising, and empowerment of adolescent girls to be the agents of change for their peers

Establishing steering committee with representation

from health, education, food systems, and social protection stakeholders at national and sub-national levels

Exploring pathways for fortified flour distribution to adolescent girls

Results achieved

Project is in its initiation phase.

Theory of change

The anticipated change process involves adolescent girls acquiring a body of knowledge on good nutrition practices through nutrition education curriculum and awareness sessions delivered by teachers at schools. Furthermore, adolescent girls will develop and practice essential social skills to effectively transfer this knowledge to their mothers, families, classmates, and peers, promoting positive changes in dietary practices within their communities.

Collaboration in our LSFF work "Circle of friends"

Partners

Benazir Income Support Programme (BISP)

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Users

Adolescent girls would benefit from nutrition education, iron supple-ments, and social skills to develop their role as change agents within their families and communities.

Local leaders would support and engage girls to leverage social change and development of the food system.

Policymakers would use the data and findings to inform provincial and national strategies on adolescent girl nutrition and social protection interventions.

Canada

Global Affairs Canada

Abanti Zakaria Nawaz, Senior Analyst
Abanti.ZakariaNawaz@international.gc.ca

Overview of our LSFF work

Focus geographies
LMICs focused on Sub-Saharan Africa and Asia

Sovereign donor who has been a leader in combating micronutrient deficiencies over the past 30 years.

LSFF scope of work Canada is interested in, and committed to, ensuring that all people benefit from LSFF as a key public health intervention.

We support Nutrition International to implement their breadth of LSFF work, which includes:

- Support to scaling programs nationally and sub-nationally, through both market and social safety net platforms, and five food vehicles: wheat flour, maize flour, rice, oil, and salt
- Research and development, including the identification of global evidence gaps and pioneering/testing solutions to address key barriers
- Advocacy at global, regional, and national levels to support the prioritization of LSFF in order to maximize public health impact

Top 3 objectives

I. Reach the poorest/most marginalized people with proven interventions- which includes addressing dimensions of accessibility and affordability

II. Continue focused advocacy for gender-sensitive and -responsive programming

III. Provide high-quality technical assistance to governments to enable improved design and implementation of their own programs

Challenges and gaps

I. Lack of political will and/or knowledge and capacity that impacts development, implementation, and enforcement of appropriate legislation

II. Consumer uptake due to challenges with shifting attitudes and behaviours, as well as product acceptability

III. Sustainable quality of scaled programming, including of development and introduction of new fortified products

IV. Global players within the fortification landscape can often feel disconnected and/or misaligned

Production of iodized salt in a factory in Pati, Indonesia

Coordination areas

LSFF is a nutrition intervention and nutrition cuts across several sectors. For maximization of progress and reduction of siloed work, coordination is crucial among areas such as:

I. Biofortification initiatives
II. Gender-based approaches
III. Climate
IV. Agriculture
V. Harmonization of guidance, practice and advocacy among global experts, practitioners and donors

Global Customs Compliance Ltd (1/2)

Izaak Wind, Expert
iwind@ziggo.nl

Overview of our LSFF work

Focus geographies
Global

Providing assistance and information in the classification of LSFF- related goods since 2023

LSFF scope of work

Our LSFF work focuses on enhancing global trade and nutrition by streamlining the tariff classification of food fortification products.

We've drafted technical papers, and a proposal to create new entries for certain products used in the production of fortified foods, as part of the World Customs Organization Harmonized System (WCO HS) 2028 review cycle.

Top 3 objectives

I. **Improve Global Health outcomes:** Enhance access to essential micronutrients by facilitating the international trade in products used in the fortification of foods, directly reducing micronutrient deficiencies and improving public health.
II. **Enhance Trade Transparency and Efficiency:** Update HS codes for products used in the fortification of foods to enable precise tracking and analysis of global trade flows, supporting informed decision-making and supply chain optimizations.
III. **Support Policy and Programme Development:** Provide detailed trade data to aid governments and organisations in crafting targeted nutritional interventions, ensuring efforts are data-driven and effectively address nutritional gaps.

Challenges and gaps

I. Data Gaps: Limited access to comprehensive trade data for products used in the fortification of foods hinders targeted policy development and programme implementation.
II. Complex Regulatory Environments: Varying international regulations and lack of specific entries in the HS complicate global trade in products used in the fortification of foods.

Coordination areas

I. Harmonized Regulatory Frameworks: Establishing uniform global standards for HS codes pertinent to products used in the fortification of foods to streamline cross-border trade.
II. Integrated Data Systems: Developing centralized platforms for sharing trade and nutritional data to enable real-time tracking and decision-making.
III. Cross-Sector Collaboration: Enhancing partnerships between governments, NGOs, industry stakeholders, and international bodies to share best practices and resources for fortification initiatives.

Initial scoping of improved HS trade codes for LSFF of flour premixes

Global Customs Compliance (2/2)

James Lenaghan jlenaghan@globalcustomscompliance.com
Izaak Wind iwind@ziggo.nl

Contribution to LSFF outcomes

By addressing challenges in identifying, tracking, and facilitating trade in food fortification products, and drafting Harmonized System (HS) entries for certain micronutrients and fortified food premixes, we aim to improve global nutrition outcomes. This effort will enhance micronutrient access, crucial for human development, through fortified staple foods, impacting individuals, families, and countries adversely affected by micronutrient deficiencies.

Results achieved

I. Drafting and submission of technical position papers to facilitate the adoption of HS 2028 codes for certain micronutrients and premixes used in the fortification of foods.
II. Our efforts have culminated in approval from Swiss Customs and endorsement by Global Alliance for Improved Nutrition (GAIN) to create new subheadings in the HS nomenclature within headings 21.06, 28.27, 28.29 and 29.36.
III. Liaised with GAIN and Swiss Customs to respond to all related technical and procedural enquiries throughout the HS 2028 amendment process which is due to be completed in June 2025.

Theory of change

Activities: Drafted a comprehensive proposal with GAIN to amend the HS nomenclature for fortified food products.
Outcomes: The HS nomenclature is updated to include specific codes for fortified food products, allowing more accurate tracking and data collection. Trade in fortified foods becomes more efficient due to the clarity provided by the specific HS codes. Governments and organizations can better monitor the trade flows of fortified food products, leading to better-informed decisions. Policymakers can use the improved trade data to create effective public health strategies and address micronutrient deficiencies.
Impact: Improved public health through tracking and trade facilitation in fortified foods. Better nutritional intake reduces disease, enhances cognitive development, and increases productivity. Efficient trade in fortified foods stimulates economic activity and development, with improved health, reduced healthcare costs, and improved quality of life.
Conclusion: Adopting new HS codes will simplify trade and enhance the monitoring and distribution of micronutrients, ultimately improving public health outcomes globally.

Collaboration in our LSFF work "Circle of friends"

Partners

We have collaborated closely with the World Customs Organization (WCO), the Global Alliance for Improved Nutrition (GAIN) and the Swiss Federal Office for Customs and Border Security (FOCBS).

Users

Our outputs primarily serve government agencies, NGOs, and businesses involved in food fortification initiatives. They can utilise our technical position papers and HS code applications to improve the classification and trade of fortified food products, enhancing the monitoring and distribution of vital micronutrients.

Global Health Strategies

Global Health Strategies (1/2)

Anjali Nayar : anayyar@globalhealthstrategies.com
Suchi Mahajan: MMahajan@globalhealthstrategies.com

Overview of our LSFF work

Focus geographies
Bangladesh, Ethiopia, India, Indonesia, Nigeria, Pakistan, Sri Lanka

GHS is a global organization with professionals from diverse backgrounds such as public health, medical, journalism, digital media, law, and social sciences. We employ policy research, advocacy, and communications to promote lasting improvements in health and well-being.

Our five key strengths are:

- *Policy research and Analysis*
- *Media & Communications*
- *Event Conference & Communications*
- *Coalition & Champion Building*
- *Community Engagement*

LSFF Project: Building Champion of Change (2019 – 2020) - India
GHS was tasked to build a select group of nutrition champions and enable them to address malnutrition by outlining evidence and promoting scaling up of proven solutions like Food Fortification (FF) at the national level and in the states of Uttar Pradesh (UP) and Madya Pradesh (MP)

Results Achieved

I. Engaged 60 champions, including policymakers, experts, influencers, journalists, etc., to amplify discourse on scaling up strategies like FF
II. Increased media coverage on micronutrient deficiencies and FF including media outputs, along with high-level panel discussions and webinars
III. Fostered an environment conducive for scale-up of FF in the states with clear and actionable recommendations in two targeted states, identifying opportunities, barriers, and pathways for scaling up FF via social safety net programs

Contribution to LSFF outcomes

The project provided a conducive environment for scaling up FF in target states. This was evidenced by the actionable recommendations from key stakeholder for scale of FF in several states. Campaign activities have successfully highlighted the need for FF as a strategic solution to address malnutrition, reaching millions of viewers and resulting in an 80% increase in media coverage on food fortification during the project period.

Coordination Areas

Public sector stakeholders and regulators such as the MoH, Food Safety and Standards Authority India (FSSAI), academicians, public health experts, policymakers (members of parliament and legislative)

Media outlets including ET Healthworld, Outlook Poshan, The Quint, The Indian Express, Seminar (Monthly Journal)

Global Health Strategies

Enable learnings on Large Scale Food Fortification (LSFF) to address malnutrition - GHS (2/2)

Anjali Nayar : anayyar@globalhealthstrategies.com
Suchi Mahajan: MMahajan@globalhealthstrategies.com

Contribution to LSFF outcomes

A more engaged public sector with improved communication and coordination with partners and key stakeholders working in LSFF, fostering sustainable multidirectional dialogue to enable the scale up of resilient and sustainable LSFF policies, programs, and regulation.

Top objectives

I. Establish a South-South learning platform to enable the scale up of resilient and sustainable LSFF policies, programs, and regulation in target countries
II. Establish a network of experts select countries from across relevant sectors (public, regulators, private etc.) and regional experts (ASEAN, WAHO etc.)

LSFF project scope of work

GHS aims to bring together key stakeholders in LSFF ecosystem, including public sector, and LSFF development partners to engage in South-South learning exchanges on LSFF program implementation, policy, and regulatory practices, and facilitate relevant knowledge sharing.

Challenges and gaps

I. Limited understanding among public sector stakeholders of the evidence, policies, regulations, and programmatic nuances related to LSFF
II. Limited utilization of existing knowledge on LSFF by public stakeholders due to lack of adaptation and translation into digestible formats
III. Limited coordination among public sector stakeholders with LSFF partners and key stakeholders
IV. Lack of a mechanism to ensure the sustainability of institutional knowledge and continuity of LSFF programs

Collaboration in our LSFF work "Circle of friends"

Partners

I. Public sector stakeholders and regulators from Indonesia, Ethiopia, Nigeria, India, Bangladesh, Pakistan, and Sri Lanka.
II. Regional organizations and development partner such as the African Union, WAHO, ASEAN, UNICEF, OECD, IFPRI, and The George Institute.
III. Private sector, Civil Society Organizations, experts, and researcher on LSFF in select countries.

Users

The intervention will benefit public sector stakeholders and regulators, LSFF development partners, as well as key stakeholders in LSFF ecosystem.

HELEN KELLER INTL (1/2)

Team/Authors : Augustine/Zaoro/Volkan/Rolf/Shawn
POC/email: aokoruwa@hki.org and ztouaoro@hki.org

Overview of our LSFF work

Focus Geographies

Africa: 15 member states of the Economic Community of West African States (ECOWAS): Benin, Burkina Faso, Cabo Verde, Cameroon, Côte d'Ivoire, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Mauritania, Mozambique, Tanzania, and Madagascar

Asia: Bangladesh, Cambodia, Nepal and Philippines

Our vision: A world where no one is deprived of the opportunity to live a healthy life – and reach their true potential.

LSFF scope of work

We support national fortification alliances (NFAs) to increase the availability of fortified foods. We collaborate with government agencies, industry representatives, and civil society organizations to maximize the impact of LSFF initiatives and improve public health. We also gather evidence on the health benefits of fortification and partner with national and regional institutions. We explore new food vehicles for fortification, such as **bouillon** in West Africa, and engage with the ECOWAS commission to update regional LSFF standards for manufacturing and safety.

Top 3 Objectives

I. Strengthen fortification of existing food vehicles, harmonization and monitoring efforts, facilitate discussions within National Fortification Alliances to promote fortification agenda and compliance.
II. Intensify efforts to engage the private sector in current fortification and the introduction of new food vehicles to tackle micronutrient deficiency.
III. Update landscape analyses and generation of evidence to fully understand current status of food fortification.

Challenges and gaps

I. Insufficient monitoring systems for large-scale food fortification compliance.
II. Inadequate engagement of national resources and low consumer awareness regarding the advantages of fortified foods.
III. Urgent need for standardization of regional standards to support cross-border trade, aligning with the African Continental Free Trade Area (AfCFTA) amidst diverse micronutrient deficiency levels and requirements across countries.
IV. Deficiency of local premix production and suboptimal premix blending infrastructure in the ECOWAS region.
V. Protracted development of Codes of Practice (COPs) and Industrial Standards at both national and regional tiers.

Coordination areas

I. Improved inter- agency coordination, complementary actions, and synergistic efforts in fortification initiatives.

II. Improved application of decisions and recommendations related to fortification by enhancing coordination between the NFA and regional Economic bodies.

Fortify West Africa Program:
Harmonization of ECOWAS Food Fortification Standards (2/2)

HELEN KELLER INTL

ENRICHI

aokoruw@hki.org

Contribution to LSFF outcomes

- Enhance national and regional fortification policies and harmonize standards to improve fortification processes for vegetable oils, wheat flour, and bouillon.
- Bolster private sector engagement through technical and capacity building.
- Conduct research to generate and share evidence-based data that support informed decision-making in fortification efforts.
- Increase access to fortified cooking oil and wheat flour for a significant percentage of the population of West Africa.

Results achieved Implemented National Fortification Alliances across 16 ECOWAS countries with uniform vegetable oil and wheat flour fortification standards.

- Achieved fortification of vegetable oils with vitamin A and both wheat and maize flours with iron and folic acid across 82 industries in 10 countries.
- Harmonized 5 ECOWAS standards for key staples and adopted a common logo in 11 countries.
- Harmonized standards ratified in 2016.
- Approx. 74% of the population have access (final project report, 2017).
- From the coverage survey in 2019:
  - 12 local producers are fortifying their oils and 90% complied with legislation.
  - Markets in all 10 regions sell fortified cooking oils.

Theory of action

Our strategy fortifies ECOWAS policies, enhances technical skills, and advances research to support mandatory fortification. Our key approach involved Harmonizing fortification standards, Advocating for mandatory fortification, and Building capacity for monitoring and quality control.

Challenges and Gaps

- Limited updated National Food Consumption and Micronutrient Surveys.
- Weak monitoring of industry compliance with LSFF.
- Limited voice of consumers' associations to advocate for fortification.
- Need for regular and timely harmonization of Regional Standards.
- High costs of premix imports and difficult procurement procedures.

Collaboration in our LSFF work "Circle of friends"

Partners

ECOWAS, West Africa Health Organization (WAHO), Small & Medium Manufacturers, (SMEs), National Fortification Alliances (NFA), Bill and Melinda Gates Foundation (BMGF), United Nations Children's Fund (UNICEF), Food Fortification Initiative (FFI), Catholic Relief Services (CRS), Global Alliance for Improved Nutrition (GAIN), Technoserve.

Users

Our results are intended for national and regional policy-makers, and industry, to strengthen decision-making and commitment to improve program implementation.

Indonesian Nutrition Foundation for Food Fortification (KFI)

Nina Sardjunani
nina@kfindonesia.org

Overview of our LSFF work

Focus geographies
Indonesia

Our vision is to alleviate hidden hunger and improved health, productivity and quality of life of the Indonesians through advocacy on the implementation of LSFF.

LSFF scope of work

- Submit to the government Long term National policy recommendation, Roadmap (2025-2045).
- Conduct studies, literature reviews, policy briefs, scientific publications on mandatory food fortification program for enhancing and sustaining mandatory food fortification policy.
- Assist the establishment of Coordination Forum, Formulation of the Integrated Monitoring and Evaluation System and serve as the thinktank of Coordination Forum to sustain LSFF policy and program.
- Advocate and disseminate the importance of mandated fortified food to address hidden hunger to the community at large through various communication channels and KFI's website.

Top 3 objectives

I. **Advocacy for the enhancement of mandatory food fortification policy** for national and sub-national policy makers by using several communication channels.
II. **Support the capacity development** of the public and private sectors by strengthening political commitment to mandatory food fortification; enhancing coordination and alignment across different sectors to strengthen existing coordination platform for LSFF; and strengthening capacity of government stakeholders and relevant partners on the implementation of LSFF program.
III. **Mandated Food Fortification gap analysis** for improving evidence-based LSFF policy: primary data analysis of households' access to mandated fortified food, analysis of big data on food consumption and micronutrient.

Challenges and gaps

I. Unsustained political commitment and lack of coordination on LSFF policies and programs.
II. Unavailable integrated monitoring and evaluation system.
III. Outdated data on micronutrients consumption and status.

Coordination area

Coordinate and advise on the formulation of:

I. Recommendations for the establishment of mandatory fortification policies, home fortification, biofortification and their regulation.
II. Supervisory policy recommendations, advocacy and public communication.
III. Research and development policy recommendations, including knowledge sharing.

Materials describing KFI LSFF story: https://bit.ly/FrameworkofFoodFortificationForum_KFI

International Food Policy Research Institute (IFPRI) - (1/2)

Danielle Resnick
d.resnick@cgiar.org

Overview of our LSFF work

Focus geographies
ET, ID, IN, MG, NG, SN, East & West Africa regions

Providing research- based policy solutions to end hunger, malnutrition, and poverty since 1975

LSFF scope of work

IFPRI is developing a framework to analyze the political economy of LSFF at national and regional levels. While LSFF is a cost-effective approach to address micronutrient deficiencies, political economy dynamics—inclusive of political incentives and implementation capacity—can undermine uptake, scaling, and institutionalization over time.

Top 3 objectives

I. To identify binding political economy constraints to LSFF within the public, private, and civil society sectors in a set of African and Asian countries as well as at regional levels.
II. To propose viable solutions to address those binding constraints, drawing on lessons learned elsewhere.
III. To provide a political economy framework that can be replicable across diverse contexts and which can help government partners, the private sector, and donors determine how to prioritize LSFF investments.

Challenges and gaps

Political economy dynamics can vary over time and across food vehicles. On political incentives, it's critical for stakeholders to see the benefits they gain from LSFF policy practices and to pursue different narratives/framings calibrated to those interests in order gain policy momentum. On implementation capacity, sustainable, own-source revenue for LSFF activities and meetings and proper capacitation of civil servants for compliance are key challenges.

Coordination areas

I. Understanding how and why regulation for mandatory LSFF has filtered through the policy process in some countries but not others.
II. Identifying effective lobbying techniques by the private sector to get various taxes and fees reduced to better incentivize LSFF practices.
III. Finding strategies to translate data from micronutrient surveys into policy documents.

Political Economy of LSFF – IFPRI (2/2)

Danielle Resnick
d.resnick@cgiar.org

Contribution to LSFF outcomes

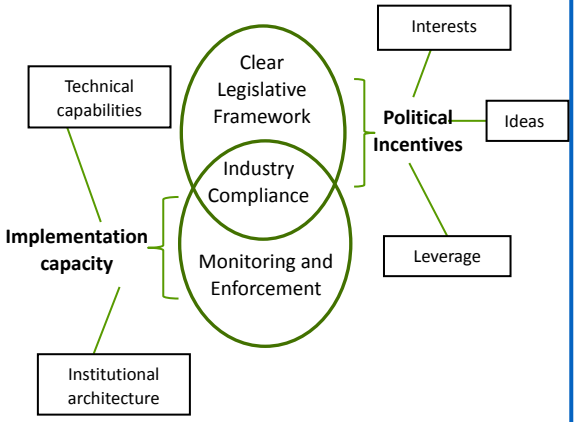
The aim of the work is, first and foremost, to provide advocacy around the main challenges in a particular country or for a specific food vehicle that prevents the scaling up of LSFF efforts. The work's secondary goals are to understand whether political incentives or implementation capacities are contributing to low private sector participation, lack of political will by the public sector, and/or low compliance with regulations.

Results achieved

I. Developed a landscape of policy actors in Madagascar's national LSFF policymaking, which helps identify areas of duplication, partnership, and reveals the multi-level governance structure in which LSFF decisions and implementation are embedded.
II. Provided recommendations for priority actions for LSFF uptake to help mitigate information asymmetries facing the private sector (e.g. establishing a dashboard of the LSFF approval process on website of the Office of National Nutrition in Madagascar).
III. Increasingly serving as a resource to donors and national partners who are requesting examples of success from other countries in overcoming binding constraints to LSFF.

Theory of action

Our theory of action is that effective LSFF requires both a set of choices about the policy framework and modalities for compliance as well as a set of investments in institutional and technical capacities for oversight and M&E. The alignment of these choices and investments requires congruence between the public, private, and civil society sectors. Achieving that congruence, in turn, requires identifying possible binding constraints that should be prioritized for action.



Collaboration in our LSFF work "Circle of friends"

Partners

We interview a broad range of stakeholders in each key geography. Such interviews have occurred with the following actors: GIZ, GAIN, Technoserve, Nutrition International, UNICEF, WFP, business associations in flour, oil, salt, rice, sugar, national academics and civil society groups, ministries/agencies relevant to LSFF, and national fortification alliances.

Users

The main users are donors and technical partners who want to learn about how they should prioritize their LSFF efforts when many different needed interventions are simultaneously required. Partners have shared the political economy analyses with national fortification alliances for validation and to identify consensus options on the way forward.

Key Material: Political economy country syntheses and scorecards (in progress)

Möhrle Happ Luther (1/2)

Marko Uhl M.Uhl@mhl.de
Eric Pickett E.Pickett@mhl.de

Overview of our LSFF work

Focus geographies
Global

MHL is part of the Crowe Global network. Our law firm specialises inter alia in international, EU and German customs and trade law.

LSFF scope of work

We examined the formal and material conditions for the creation of a new subheading in the World Customs Organization's Harmonized System (commodity code) for certain premixes used in LSFF to allow for better tracking of the products from end to end and made specific recommendations for defining various products for customs classification purposes in the Harmonized System. Taking the global supply chain into account, we also indicated various alternatives for facilitations which reduce frictions for suppliers and importers while increasing efficiency and effective controls by customs authorities.

Top 3 objectives

I. Define specific LSFF premixes as a separate entry in the Harmonized System.
II. Provide legal support in the creation of a new subheading in the World Customs Organization's Harmonized System which allows the premixes to be tracked throughout the supply chain.
III. Provide insight into facilitations and simplifications which satisfy the importing country's legitimate needs and interests while also reducing trade friction for the undertakings engaged in the customs operation.

Challenges and gaps

LSFF premixes currently fall in a catchall subheading, so they are grouped with many other products. This makes tracking difficult at best and subjects them to high tariffs, thus frustrating development goals and creating barriers to trade. Misclassification is also an issue.
A lack of familiarity that the provisions of customs law under international law means that Member States may overlook opportunities which can help them achieve their development goals while maintaining effective customs enforcement and benefiting trade in LSFF premixes. A closely related issue is that of the standards for determining whether an imported product is an LSFF premix or not.

Coordination areas

Coordination on the use of international standards for trade in LSFF premixes. There are a number of internationally recognised standards for various LSFF premixes which have been promulgated by various organisations, agencies and bodies which can be useful for defining an LSFF premix for customs classification purposes.

Coordination on accreditation of LSFF premix products in respect of compliance with the relevant standards.

New subheading in the World Customs Organization's Harmonized System (2/2)

Contribution to LSFF outcomes

Create a new subheading in the World Customs Organization's Harmonized System. This will allow for better tracking of the products to ensure that they are being delivered to the countries most in need and to the people most at risk.

A new subheading will also provide a common set of rules for customs classification and a common understanding of what LSFF premixes are. This will increase efficiency at the customs border. Consequently, it can be expected that trade in these products will increase, which will make a substantial contribution to the goal of combating malnutrition.

Results achieved

The study we provided is being used as the basis for a proposal to create a new subheading in the HS. The proposal is actively being discussed at the World Customs Organization.

In this study we also examined examined various methods which can be used by customs authorities to reduce friction in trade in LSFF premixes. These proposals include, for example, certification and accreditation programmes which would allow for more efficient customs clearance.

Theory of change

A separate entry in the Harmonized System will allow LSFF premixes to be separately identified as such. This allows for them to be tracked, which will help ensure effective delivery (see Contribution to LSFF outcomes).

The lack of a separate subheading has led to unnecessary trade friction, e.g. disputes concerning the correct customs classification of these products. A global solution is needed in order to create a "common language" concerning these products, thus giving traders greater certainty and uniform set of rules. The resolution of customs issues is thus a critical component to the success of LSFF programmes.

A separate entry in the HS, in particular in combination with an accreditation programme, will aid customs authorities in more easily identifying the premixes as LSFF products and reduce trade friction for undertakings engaging in trade in these goods, thereby significantly facilitating their delivery to those most in need.

Collaboration in our LSFF work "Circle of friends"

Partners

Bill and Melinda Gates Foundation.

Users

Manufacturers of LSFF premixes
Customs authorities
Exporters/ Importers of LSFF premixes.

Marko Uhl M.Uhl@mhl.de
Eric Pickett E.Pickett@mhl.de

NATIONAL AGENCY FOR FOOD AND DRUG ADMINISTRATION AND CONTROL (NAFDAC) NIGERIA

Eva Edwards (for NAFDAC LSFF Team)
Food Safety and Applied Nutrition Directorate,
NAFDAC (Email: edwards.eo@nafdac.gov.ng)

Overview of our LSFF work

Focus geographies
Nigeria

At NAFDAC, we assess and verify through compliance monitoring at import, production and market level that selected food vehicles for mandatory fortification with micronutrients are adequately fortified.
Active in LSFF since 1993

LSFF scope of work

I. Monitoring mandatory fortification of selected food vehicles (salt, wheat and maize flour, semolina, vegetable oil and sugar) through GMP assessment of production facilities for compliance with national food fortification standards and regulations.
II. Assessment of the fortification status of imported food vehicles for mandatory fortification at ports of entry (monitoring compliance).
III. Assessment of the fortification status of food vehicles for mandatory fortification at market/retail level (monitoring compliance).
IV. Registration and issuance of marketing authorization for premixes and selected food vehicles.
V. Serve as the Secretariat of the National Fortification Alliance (NFA) – multi stakeholder platform for LSFF.

Our interest & contribution to food fortification
We seek to contribute to reducing/eliminating micronutrient deficiencies in Nigeria through availability of adequately fortified foods using effective regulation and control.

Top 3 objectives

I. Sustained adequate fortification of selected food vehicles for consumption by the populace to contribute to equitably reducing/eliminating micronutrient deficiency (hidden hunger).
II. Monitor and assess industry compliance with national food fortification standards and regulations.
III. Sustained awareness and demand for adequately fortified foods by consumers.

Challenges and gaps

I. Limitations in technical and financial capacity for fortification (acquiring equipment, micronutrient premix, conducting testing) particularly by micro- and small-scale producers, poor micronutrient premix quality, inadequate numbers of local premix providers, high cost of importation of premix, importation of unfortified or inadequately fortified products.
II. Inadequate funding for regular compliance monitoring and enforcement of food fortification regulations, inadequate numbers of trained personnel (field officers, data analysts, laboratory analysts).
III. Lack of sustained sensitization of the populace on the benefits of fortified foods.

Coordination areas

Priority coordination areas that need to be improved for a more effective LSFF ecosystem:

I. National fortification alliances need to be strengthened or established where they do not exist.
II. Governance structures for LSFF need to be established or strengthened. Linkages between and among MDAs working in the LSFF ecosystem need to be strengthened.
III. Synergies should be created among various development partners working in-country in the LSFF space.
IV. Coordination of researchers and policy-makers for government-led, evidence-driven implementation of LSFF.

National Department of Health South Africa

Faith Masala and Rebone Ntsie
Faith.masala@health.gov.za
Rebone.Ntsie@health.gov.za

Overview of our LSFF work

Focus Geographies

Republic of South Africa

Regulations related to the Fortification of certain Foodstuffs came into effect April 2003 and was amended in November 2008

LSFF scope of work

NDoH ensures that food fortification mix manufacturers, importers or suppliers and food vehicle manufacturers complies with the food fortification Regulation of South Africa:

Coordinate registration of food fortification mix manufacturers, importers or suppliers with the National Department of Health. SA Bureau of Standards (SABS) – responsible for the compliance monitoring - perform an audit and take samples for analysis for new registrations and re-registrations of companies. SAGL- test and analyze sampled fortification premix and provide results.

Evaluate applications forms and the supporting documents, SABS audit report and laboratory test results for approval for registration.

Liaise with key stakeholders including authorities responsible for compliance monitoring and enforcement.

Review and amend regulations as needed.

Top 3 objectives

To increase coverage of staple foods mandatory fortified with micronutrients for the population, particularly the poor through:

I. Strengthening compliance monitoring and enforcement of the food fortification programme
II. Mandatory fortification of cake flour and voluntary fortification of highly fortified maize meal for infants above 6 months
III. Design and implement at scale nutrition communication strategy geared towards creating awareness on highly fortified maize meal for infants above 6 months

Challenges and gaps

I. Variability in the micronutrient content of added micronutrients to food vehicles is not homogenous. The analytical results of fortified foods are not reliable and may be contested by food vehicle manufacturers , importers or suppliers in court.
II. Fortification mix formulations not aligned to the WHO. There is a need to change the iron compound to a more bioavailable form, increase the zinc level and include vitamin B12.
III. Classes of maize meal and wheat flour in the fortification regulations not aligned with the stipulated classes in the regulations for maize, wheat flour and bread under the Agricultural Products Standards Act.
IV. Many in-store bakeries use cake flour (an ash content less than 0.6%) to bake bread. Cake flour is not fortified but it is VAT exempted.

Coordination areas

Compliance monitoring and enforcement: implementing an audit-based system for compliance monitoring instead of taking of samples for laboratory analysis requires strong coordination with:

- Department of Agriculture, Land Reform and Rural Development (DALRRD)
- South African Grain Information Service (SAGIS)
- Maize Forum and Wheat Forum
- National Chamber of Milling (NCM)
- SA Chamber of Baking (SACB).

Netherlands Ministry of Foreign Affairs

Marijke-de.graaf@minbuza.nl

Overview of our LSFF work

Focus geographies
LMIC's, focusing on Sub Saharan Africa

NL is a strong advocate for preventing micronutrient deficiencies since 2009.

LSFF scope of work

NL MoFA indirectly supports LSFF initiatives. We join forces with global actors such as GAIN, the Scaling up Nutrition (SUN) movement, UNICEF and WFP. At the same time we have contributed for more than 10 years to large-scale food fortification of staple foods and/or cooking oil in LMICs (e.g. rice fortification in Bangladesh), engaging in public-private partnerships with, among others, DSM, Smarter Futures and Africa Improved Foods (AIF) in Rwanda. The latter leads a partnership focusing on locally sourcing and fortification of maize for national and regional markets.

Top 3 objectives

We support coalitions of development, private and research actors to contribute to:

I. Improvement of national legislation for fortification.
II. Improvement of access to fortified foods among BoP consumers, with engagement of the private sector.
III. Applied research and knowledge management to prevent micronutrient deficiencies, including LSFF.

Coordination areas

I. See LSFF as one of multiple approaches towards more sustainable and healthy diets.

II. Aiming for the complementarity and balance among the numerous intervention strategies towards healthy diets.

III. Securing engagement of all food system actors, including consumers.

Challenges and gaps

The current global food and nutrition crisis, draws attention towards securing sufficient quantities of food, while leaving less attention and resources to focus on quality aspects, i.e. nutritional value of common (staple) foods and diets.

How to reach the poorest, including both small holder farmers/land laborers and BoP consumers?
How to ensure that BoP consumers have secured access to and knowledge on sustainable healthy diets.

Organisation for Economic Co-operation and Development (OECD)
(1/2)

Supporting regulatory change management to improve large-scale food fortification

Christiane Arndt-Bascle and Vaia Karapanou
Email: Vaia.Karapanou@oecd.org

Overview of our LSFF work

Focus geographies

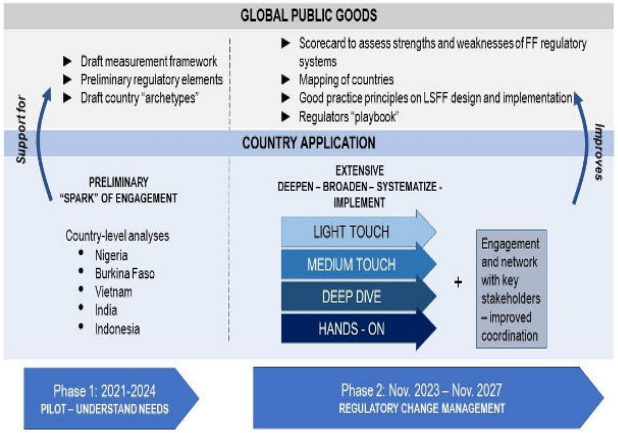
Bangladesh, Ethiopia, India, Indonesia, Nigeria, Senegal, Tanzania, Vietnam, ECOWAS, EAC

OECD: an international organization promoting policies that improve the economic and social well-being of people around the world.
*Active in LSFF since **2021.***

LSFF scope of work

The regulatory system is a critical enabling factor for the success of LSFF programmes. With the project "Supporting regulatory change management to improve LSFF".

OECD focuses on the LSFF regulatory policy and its implementation to identify bottlenecks as well as priority areas for reform. The project will develop global public goods to improve diagnostic and response capacity in all countries implementing LSFF programmes and a set of tools to improve impact of LSFF interventions in selected countries. The tools will include scorecards and country profiles to provide policy makers with in-depth analysis and indicators to assess regulatory performance and identify areas for reform.



Challenges and gaps

I. Information on the LSFF regulatory framework is difficult to obtain, may not be publicly accessible and/or may be lacking altogether for certain countries.
II. Regional and local differences in the implementation of LSFF regulation require in-depth research, analysis and work on the ground to enable adequate understanding of how LSFF regulation is actually implemented.
III. The structure of staple food industry is different in every country which may imply a different scope of application of regulation and its implementation.

Top 3 objectives

I. Analyse existing LSFF regulatory frameworks and generate relevant information for policy makers and development partners.
II. Identify areas for improvement and inform on which interventions are better suited to attain optimal impact in a given country context.
III. Provide a checklist of key regulatory approaches and good practices that enhance the design and implementation of LSFF regulations and serve as a reference point for tracking progress in LSFF regulatory performance overtime.

Coordination areas

I. Peer exchange.
II. Information and data sharing.
III. Coordination between development partners working in countries.

SUPPORTING REGULATORY CHANGE MANAGEMENT TO IMPROVE LSFF - OECD (2/2)

Christiane Arndt-Bascle and Vaia Karapanou
Email: Christiane.ARNDT-BASCLE@oecd.org

Contribution to LSFF outcomes

- Better understanding of ff regulatory issues globally.
- Improved identification of binding constraints created by FF regulatory systems – Easier design of reform needs.
- Increased support for FF regulatory improvements in target countries.
- Greater and more effective support by development partners.

Results achieved

I. OECD's work so far has highlighted the critical role of regulatory frameworks for the implementation and sustainability of LSFF programmes.

II. OECD has developed a Measurement Framework for Large-Scale Food Fortification Regulation that highlights 6 key pillars identified by experts and practitioners and is intended to help identify regulatory strengths and weaknesses and potential areas for improvement.

Theory of action

The OECD will develop a comprehensive toolkit to help regulators identify strengths they can build on and areas for improvement, learn about best practices from other countries, and drive reform in their own jurisdiction based on recommendations tailored to their country context. Specific deliverables include:

- **A scorecard** that will allow to assess the strengths and weaknesses of FF regulatory systems in any jurisdiction, identify binding constraints and areas in need of reform.

- **A mapping of the FF regulatory systems** in approx. 10 countries, to better understand what information/data is missing.

- **A deep-dive** in 10 geographies that will contribute to validate the scorecard and stimulate the start of reforms by increasing engagement with stakeholders and identifying concrete actions to be taken to rapidly improve the FF regulatory system in these jurisdictions.

- **Implementation of a full Regulatory Change Management support intervention** in one selected country will provide both immediate tangible improvements in that country, and a blueprint for future reforms to be led by other governments and development partners, as well as a demonstration effect that can increase the salience of the issue in other countries.

Collaboration in our LSFF work "Circle of friends"

Partners

BMGF and selected experts on LSFF and regulatory delivery including from WHO, GAIN, USAID, FAO, IFC etc. through an Advisory Group that has been established to support this project – other orgs involved in supporting the regulation of LSFF.

Users

- Policymakers will have a diagnostic tool, a toolkit to help them improve their systems and concrete reform recommendations.
- Development partners will have an easy overview of which countries are lagging or ahead, which areas in a given country are priorities for reform or rather doing well, and recommendations on how to structure their assistance intervention in light of constraints in the regulatory system.
- Bilateral and multilateral donors will have a clear pathway to enabling more sustainable food systems and supporting public reform.

STANDARDS ORGANISATION OF NIGERIA

Yunusa B Mohammed-ybmohd@gmail.com
HEAD, FOOD GROUP, SON

Overview of our LSFF work

Focus geographies
Nigeria

Standardisation and Quality Assurance
Active in LSFF since 1993.

The scope of LSFF is monitoring of fortification at the factory level, sampling and testing for compliance purpose and enforcement activity as applicable.

SON interest and by way of mandate is in the elaboration of national, regional and international standards/codes of practice for food fortification. Our contributions include mandatory requirements of micronutrients in relevant food standards, we also collect and make data available on food fortification activities at factory level, provide technical support to food factories, enforce compliance and collaborate with other stakeholders on LSFF.

Top 3 Objectives

I. **Regulation and Standards Setting**: SON plays a central role in developing and enforcing standards for fortified foods in Nigeria. By establishing regulatory frameworks and quality control measures, SON ensures that fortified foods meet the necessary nutritional requirements and safety standards.
II. **Industry Collaboration:** SON collaborates closely with food manufacturers, processors, and distributors to promote the production and distribution of fortified foods in Nigeria market, for the purpose of enhancing nutritional status of the target population.
III. **Compliance monitoring:** Ensure adequate testing of food vehicle to track fortification levels.

Challenges and gaps

I. Inadequate training for personnel to carry out these duties and distortion in succession plans due to inadequate manpower.
II. Lack of adequate accredited laboratory to facilitate testing.
III. Insecurity has made access to some locations difficult.
IV. Inadequate logistics for monitoring and technical support provision to SMEs.
V. Economic factors and unstable exchange rate leading to interruption in the supply chain hence low compliance rate.

VITAMIN A FORTIFIED

Coordination areas

I. The supply of quality premixes, availability and ease of access especially for SMEs and support to SMEs.
II. Research and fortification impact assessment.
III. Provision of portable mobile test kit.
IV. Continuous capacity building of regulators on testing and evaluation monitoring.

The George Institute for Global Health

The George Institute for Global Health (1/2)

Laura Fisher lfisher@georgeinstitute.org.au
Alexandra Jones ajones@georgeinstitute.org.au

Overview of our LSFF work

Focus geographies
Ethiopia, Indonesia, Kenya, Nigeria, Pakistan, Philippines, South Africa, Thailand, Vietnam

We are a global health research organisation focused on NCDs and injury.

LSFF Scope of work

We examined how nutrition labelling acts as a barrier or enabler to LSFF in 9 countries (and two comparators – EU and US) and recommended how regulations could be reformed to accelerate LSFF for public health impact.

Top 3 objectives

I. Develop best practice nutrition labelling to support LSFF (framework).
II. Apply the framework to 9 countries.
III. Recommend how regulations in 9 countries can be reformed with broader applicability.

Challenges and gaps

Good governance of labelling (incl. monitoring and enforcing) is critical, needs to be well-resourced, and should be aligned and coordinated with other food regulatory system activities.

Coordination areas

Priority coordination areas for more effective LSFF: (1) **good governance and effective alignment and coordination** across the food regulatory system; (2) **policy coherence** to ensure LSFF regulations support and are part of comprehensive policies to promote healthier, more nutritious diets.

Policy and regulatory determinants of nutrition labelling to support LSFF (2/2)

Alexandra Jones ajones@georgeinstitute.org.au
Laura Fisher lfisher@georgeinstitute.org.au

Contribution to LSFF outcomes

Transparency embedded in the value chain and national policies strengthening to enable effective standards and regulations.

Results achieved

Best practice nutrition labelling for fortified foods include:

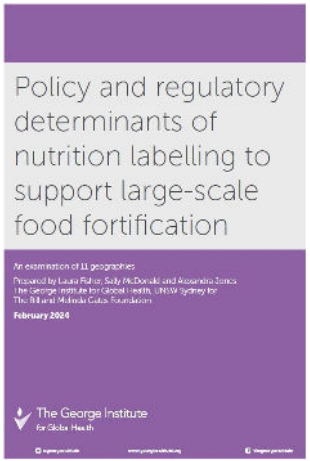
I. ***Mandatory nutrient declarations*** (with standardised nutrients, including important added micronutrients or where intakes are set) on all pre-packaged foods, including fortified foods.

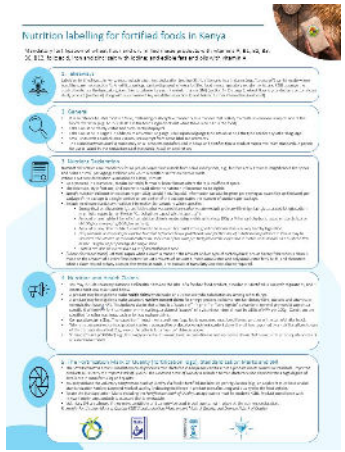
II. ***Voluntary nutrition and health claims*** on 'good for public health' fortified foods (i.e., mandatory fortified staples and some voluntary fortified foods). Standardised claims for fortified foods can aid consumer understanding and regulatory efficiency.

III. ***Voluntary or mandatory standard fortification logos*** on 'good for public health' fortified foods, alongside consumer education.

Theory of Action

Our research indicates that best practice nutrition labelling (***nutrient declarations***, ***nutrition and health claims*** and ***fortification logos***): accurately informs ***consumers*** about nutrient quality of foods and presence or absence of micronutrients, with potential to increase demand; helps ***industry*** market communicate nutrient quality of foods; and helps ***government*** communicate the benefits/quality of fortified foods, enabling monitoring and enforcement.





Collaboration in our LSFF work "Circle of friends"

Collaboration across the food regulatory system could help to ensure fit-for-purpose recommendations at these crucial junctures.

Partners

We engaged the OECD and several specialist consults, beyond surveying and interviewing stakeholders from industry, regulators, government, and research and advocacy.

Users

Our outputs are targeted at **policymakers** to provide potential recommendations for improved nutrition labelling regulations and regulating, and at **industry** to help ensure regulatory compliance.

The Power of Nutrition (TPoN) (1/2)

Alok Ranjan, Director of Programmes & Investments aranjan@powerofnutrition.org

Overview of our LSFF work

Focus geographies : Nigeria, Ethiopia and Rwanda.

The Power of Nutrition works on LSFF by convening partnerships across public and private stakeholders and blending financing across a diverse set of funders, to reach underserved populations (especially women and children).

LSFF scope of work

In **Rwanda**, we are partnering with the Government and WB to strengthen the supply chain of fortified blended foods (FBF) to improve distribution, availability and scale of FBF, as well as creating demand for FBF through linkage with social protection and improving adherence to recommended usage through behavior change & rigorous evaluation to measure impact.

In partnership with the WB we are supporting the Accelerating Nutrition Results in **Nigeria** (ANRiN) programme. One of the workstreams is exploring the linkages between LSFF and nutrition-sensitive governance and fiscal policy. Implementation research is currently being undertaken across 12 states.

Evidence and learning from both programmes will contribute to scale-up in Rwanda, Nigeria and Ethiopia in Dec '24 onwards (subject to leveraging new funds).

Top 3 objectives

I. TPoN aims to increase the funding for addressing LSFF through blending of financing across public and private stakeholders.
II. Integrate LSFF through partnerships which are multisectoral in nature, bringing LSFF together with Social Protection, Gender, Food systems and with focus on localization.
III. TPoN through its partnerships, scales up LSFF to reach the population which is most impacted (women and children) in the most underprivileged population in the sub-national geographies with highest burden of undernutrition.

We have done this in Rwanda and are now planning to do the same in Nigeria and Ethiopia.

Challenges and gaps

I. There are limited number of funding partners (public and private) who prioritize funding LSFF as of now.
II. There is a limited number of examples across a majority of high burden countries, where LSFF through Social protection programmes has been implemented at scale.
III. LSFF is missing as a key intervention for majority of nutrition implementing partners.

A health worker holding fortified food at Busera Health Clinic, Rwanda

Coordination areas

I. LSFF partnerships need to focus on strong linkages with gender and countries' social protection programmes.
II. Approaches like Blended financing through bringing public and private funding and leveraging funding sources like concessional loans through Multilateral Development Banks, needs to be explored in more and more countries (building on the Rwanda model).
III. All LSFF stakeholders need to have a coordinated approach to best learn from each other and to get maximum impact.

Rwanda: Scaling fortified blended food to improve nutrition outcomes among pregnant and lactating women and children (2/2)

Jeffrey Misomali
jmisomali@powerofnutrition.org

Contribution to LSFF outcomes

I. Increasing the financing though blended finance comprising of grants, concessional finance and domestic resources.
II. Strengthening the supply chain of fortified blended foods (FBF) to improve distribution, availability and scale of FBF.
III. Creating demand for FBF through linkage with social protection including cash transfers.
IV. Improving adherence to recommended usage though behaviour change and rigorous evaluation to measure impact.

Expected Results

Between 2020 and 2023, $8million of blended finance was invested in FBF procurement, reaching 60,000 pregnant and lactating women and 120,000 children. A midline evaluation underway with results expected in May 2024:

I. Increased contribution of domestic resources with the government slowly including FBF financing in budgets.
II. Improved supply chain in FBF distribution with reduced low stock out of FBF in health facilities.
III. Improved adherence to recommended use of FBF at the community level.
IV. Contribution to improved birth outcomes (specifically birth weight).
V. Improved nutrition outcomes among children under 2 years of age (specifically reduction in stunting and wasting).

For more information:
Ministry of Health - Rwanda Biomedical Centre

Theory of Action

Impact: Well-nourished pregnant and lactating mothers and children under the age of two.

Approach: Multi- faceted approach combining financial mechanisms, supply chain strengthening, demand creation, and behaviour change to enhance the availability, accessibility, and utilisation of FBF.

Main activities:

I. **Blend financing** to incentivise governments to gradually scale and budget for FBF, and aim to gradually decrease reliance on external funding.
II. **Reduce stockouts of FBF** in health facilities by contributing to the strengthening of value chains.
III. **Create demand** for FBF through social protection and social behaviour change to enhance adherence on recommended FBF usage.
IV. **Monitoring and evaluating** to inform learning and assess impact.

Collaboration in our LSFF work "Circle of friends"

Partners

- The Government of Rwanda – domestic resources and delivery channels.
- The World Bank – concessional financing.
- Africa Improved Foods - production of fortified blended foods.
- UK FCDO – grant financing.
- Children Investment Fund Foundation – grant funding.
- Bill and Melinda Gates Foundation – grant funding.
- Herbalife Nutrition Foundation – grant funding.

Users

- Pregnant and lactating mothers in remote communities and in the lowest wealth quintiles in districts with highest undernutrition rates.
- Children aged 6-23 months.

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

The World Bank
Health, Nutrition & Population Global Practice

Mireya Vilar
mvilar@worldbank.org

Overview of our LSFF work

Focus geographies
LMICs, global

Investment Framework for Nutrition - Global Challenge Program (Food and Nutrition Security)

LSFF scope of work

Investment Framework for Nutrition

1) Targeted **systematic review** on nutrition-specific interventions including meta-analyses, systematic reviews, and RCTs published between 2018-2023.

- Focused on interventions in LMICs, with evidence on the effects on SDG 2.2 outcomes.
- Evidence across four thematic areas, one of them population level interventions through fortified foods.

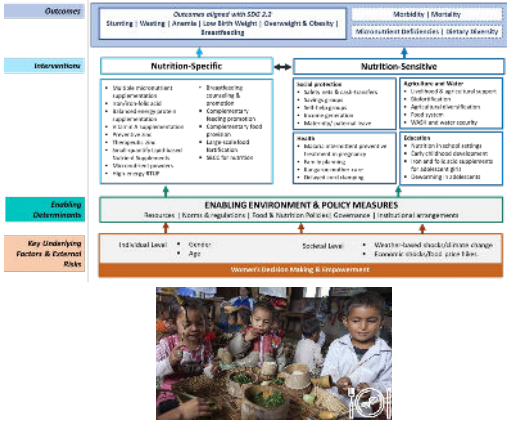
2) Analyze LSFF from **a policies and fiscal measures** framework perspective to enable and promote better nutrition.

- Requirement of legislation, standards, and monitoring guidelines.
- Ensure nutrient, quality, and safety.

Top 3 objectives

Investment Framework for Nutrition

I. Provide an update on cutting-edge evidence.
II. Present financing estimates and innovative financing options.
III. Assess cross-sectoral and multi-stakeholder actions/ strategies that can be replicated and scaled across countries.



Challenges and gaps

Most pressing Limited literature (i.e., synthesis reviews, RCTs) on all types of fortified foods and free of conflict of interest.

I. Limited information from an economic evaluation perspective (i.e., cost, CEA, SROI).
II. Bounded global information about
  A. Regulations, standards, and monitoring guidelines, including limitations to fortified UPF deemed unhealthy.
  B. Stakeholder and network analyses.
  C. Implementation research.
  D. Market structure and financial mechanisms/incentives.

Coordination areas

I. Supportive and enforceable policies and regulations.
II. Implementation mechanisms to ensure that fortified foods reach the target population, and that products are accepted and consumed.
III. Integrating sustainable and scalable fortification into food systems (that consider costs and efficient market structures).

UNICEF (1/2)

Vilma Tyler; vtyler@unicef.org
Mauro Brero; mbrero@unicef.org
Manpreet Chadha; mchadha@unicef.org

Overview of our LSFF work

Focus geographies

BMGF Rising 2.0: Regional level - WCAR, ESAR, ROSA, EAPR; Country - ID;
USAID USI: Regional level - WCAR: GH, SN; ESAR: MG, MZ, TZ; MENA: EG, IQ, LB, MA; ROSA: BT, NP, PK; EAPR: LA, MN, PH

UNICEF prioritizes scaling up of fortification of staples and strengthening of existing salt iodization programmes as cost effective interventions for the prevention of micronutrient deficiencies through the food system for children, adolescents and women.

LSFF scope of work

The UNICEF Nutrition Strategy 2020–2030 prioritizes better foods and diets for children through food supply chain actions, including **mandatory LSFF**. This includes strengthening of fortification of staples (wheat flour, rice, and cooking oil), and salt iodization programmes and other context-relevant forms of LSFF to improve the dietary quality and nutritional status of children, adolescents and women.

UNICEF is supporting the technical capacities of regional coordination mechanisms and governments to plan, implement and track effective and sustainable LSFF policies, regulations and programmes.

Top 3 objectives

I. Strengthening the capacities of regional platforms and governments to improve LSFF policies, legislations, strategies, financing, coordination and partnerships.

II. Leading the renewal of the global universal salt iodization (USI) agenda to update and revitalize USI as a cost effective, public health intervention for the prevention of Iodine Deficiency Disorders (IDD).

III. Integrating the food fortification agenda, including USI, within the broader nutrition agenda through the food systems.

Challenges and gaps

I. Many countries that could benefit from fortification programmes are not implementing them while at the same time many existing programmes are sub-optimally designed and/or implemented.

II. Inadequate governance, political commitment and regulatory enforcement, which fundamentally fails to create a supportive environment for food processors to fortify.

III. Low sustainability and integration into routine systems.

Coordination areas

Inter- and intra-region public sector coordination for LSFF

In-country multi-sectoral coordination

Multi-partner coordination at national- and sub-national levels

USAID-supported Iodine deficiency disorders (IDDs) prevention and control through universal salt iodization - (2/2)

Vilma Tyler; vtyler@unicef.org
Mauro Brero; mbrero@unicef.org
Manpreet Chadha; mchadha@unicef.org

Contribution to LSFF outcomes OF THIS PROJECT

Advocacy: providing strategic support and evidence-based advocacy support to on-going planning and implementation of USI programmes, within national structures, systems, and budgets.

Enabling environment: strengthening government engagement, partnerships convening, policy/standards formulation and design for USI programmes at national levels.

Knowledge generation: leading development of a global renewed agenda and guidance for USI plans and programmes; steering documentation of good practices and lessons learnt for USI programmes.

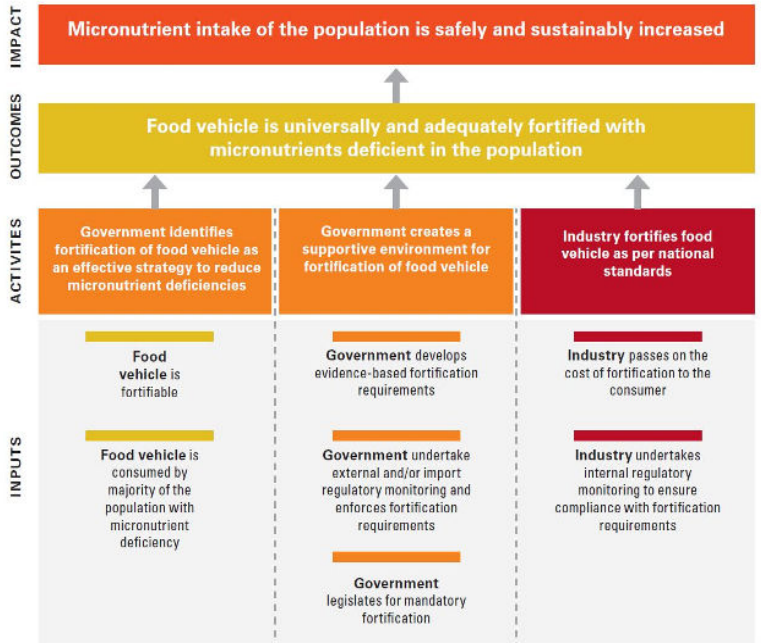
Enhancing global impact for LSFF: strengthening tri-partite collaboration with BMGF and USAID to advance the global LSFF and USI agenda.

Results achieved BY THIS PROJECT

I. Stronger USI regulation and policies support at regional level in five priority regions.
II. Sustainable USI programmes being designed and implemented in at least 15 countries, that are lagging behind.
III. Led the finalization of a renewed agenda and guidance for USI.

Theory of change OF THIS PROJECT

UNICEF follows the following theory of change of mandatory fortification programmes presented below to strengthen USI programm planning and delivery at country level:



Collaboration in our USI work "Circle of friends"

Partners

Partners: BMGF, CDC, GAIN, IGN, MNF, NI, USAID, WHO, and others working in the USI domain

Users

National and sub-national governments and policy-makers; UNICEF and other partners' staff at different levels and other partners - to strengthen evidence-informed design and delivery of USI programmes

UNICEF's large scale food fortification guidance note

UN World Food Programme (1/3)

Team/Authors: Saskia De Pee, Senior Nutrition Adviser, WFP. saskia.depee@wfp.org

Overview of our LSFF work

Focus geographies
BD, ET, IN, NG, LK, NP, PK, GH

*WFP has been active in LSFF since **2004,** when fortification of flours was mandated*

LSFF scope of work

WFP's LSFF focus is pivoted on strengthening capacity of governments and private sector on improving, in a coordinated manner, the supply and demand of fortified staple foods, particularly amongst those in greatest need of an improvement of their micronutrient intake.

WFP's interest is to identify and reach those at highest risk (with the largest MN intake gap), including by improving access through social assistance programmes, and to harness institutional demand to reach critical demand levels to enable business development.

Key projects under WFP's portfolio:

- Global Food and Nutrition Crisis Response Project
- Improving access to data on risk of inadequate micronutrient intake: MIMI Project

Top 3 objectives

I. Identify those at highest risk of inadequate micronutrient intake through analysis of available data and evidence.

II. Capacitate governments and private sector to increase availability and affordability of fortified staple foods for those at highest risk of inadequate intake.

III. Create adequate demand for fortified staple foods through integration into relevant Social Assistance Programmes, including school meals, and Open market channels.

Challenges and gaps

I. Lack of adequate capacity amongst stakeholders to plan, implement and monitor LSFF programmes/initiatives.

II. Contextual complexities of food value chains in each country. For example, market share between small and large scale millers.

III. Lack of capacity amongst government and private sector on technical and programme aspects of fortification.

Coordination areas

I. Evidence generation

II. Regulatory ecosystem

III. Linking and balancing adequate demand and supply

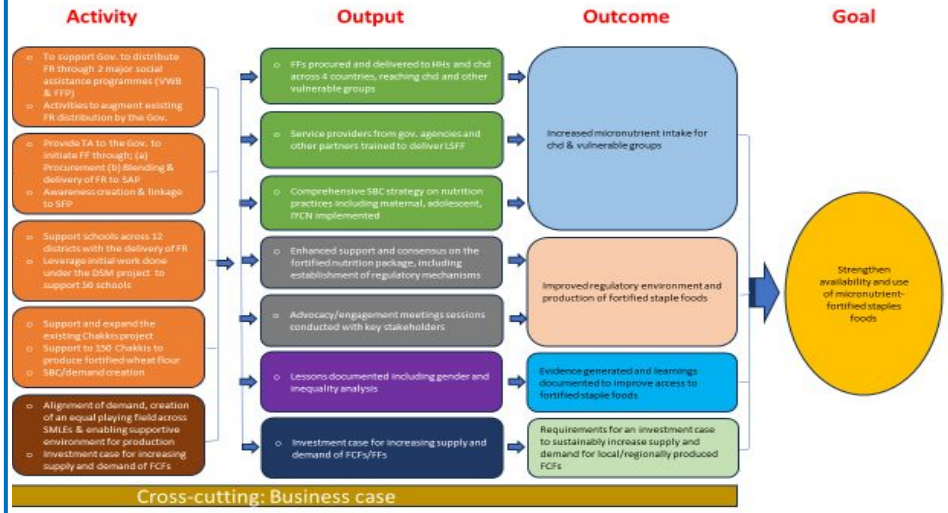
Global Food and Nutrition Crisis Response, Linking FF & SP – WFP (2/3)

Team: Saskia De Pee and Suresh Lakshminarayanan, suresh.lakshminarayanan@wfp.org

Contribution to LSFF outcomes

WFP's GFC project focuses on capacity strengthening of government and private sector, to meet institutional demand from social assistance and school meals programs, using open market channels as well. This includes evidence generation, policy advocacy, technical assistance to industry, communication and awareness generation through IEC activities. A knowledge component that will provide insights into gender aspects is also included.

Theory of change



Results achieved

I. A total of 1.14M individuals across three countries of Bangladesh, Pakistan and Nepal have been reached with fortified staple food (rice and wheat flour) through social protection and open market channels.

II. A total of US$24.3M commitment secured from three country governments in form of 50,300 MTs of rice for fortification programme. Additionally, US$218,000 co-investment leveraged from 20 rice millers in the form of infrastructure investments for this project.

III. Fortified Rice formally launched by governments of Sri Lanka and Nepal, with technical assistance of WFP, for the first-time in the country.

IV. Gazette notification of standards for rice fortification by Government of Nepal, with support of WFP.

Collaboration in our LSFF work "Circle of friends"

Partners

I. Country governments through line ministries, technical advisory groups, food regulators, and provincial administrations.

II. Private sector – Millers (small, medium and large scale), associations of millers.

III. Other technical Partners – Nutrition International, PATH and Technoserve.

Users

Knowledge products developed from this project are aimed to support governments and other technical partners to plan, design, implement and monitor fortification programme, using platforms that reach groups most at risk of inadequate MN intake.

For more information: https://www.wfp.org/food-fortification & https://www.wfp.org/publications/food-fortification

Modelling and Mapping Risk of Inadequate Micronutrient Intake –MIMI – United Nations World Food Programme (WFP) (3/3)

Team/ Authors: Saskia de Pee and Frances Knight – frances.knight@wfp.org

Contribution to LSFF outcomes

MIMI is helping close gaps in the nutrition data landscape by applying novel approaches to model and map the risk of inadequate micronutrient intake. To inform national-level decision making on fortification and other micronutrient programmes in the short-medium term

Theory of change

MIMI contributes to filling evidence gaps by:

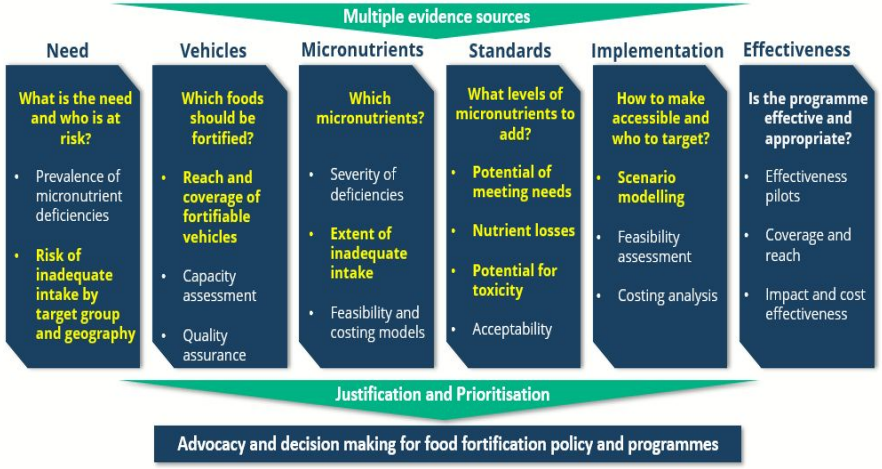
a) Estimating risk of inadequate micronutrient intake by modelling household consumption data, when available and of good quality

b) Predicting risk of inadequate micronutrient intake using machine learning models when consumption data are unavailable or do not reflect the current situation

Evidence that can be estimated or predicted through MIMI are highlighted in yellow on the below conceptual framework of evidence needs across the fortification policy cycle.

Results achieved

- Qualitative research on fortification policy evidence needs and use complete in three countries
- Base models to estimate risk of inadequate micronutrient intake and scenario modelling complete for Ethiopia, India and Nigeria and fortification scenarios modelled, in collaboration with policy partners
- Predictive machine learning models complete for Ethiopia and Nigeria (with cross-country testing), underway for India
- Stakeholder engagement and capacity building ongoing in all three countries



Collaboration in our LSFF work "Circle of friends"

Partners

Governments of Nigeria, India and Ethiopia
WFP Country Offices
Ethiopian Public Health institute
MAPS project
DInA
FRAYM
MINIMOD
FAO Diet data team

Users

Decision makers and their advisors from government and non-government organisations, researchers and donors making or informing decisions and advocacy about food fortification programmes, specifically in response to policy questions about the need for and potential contribution of different fortification scenarios.

See more at bit.ly/MIMIBRIEF

QA/QC

Workstream

Compliance for sustaining LSFF success: Enabling risk based monitoring of LSFF (QA/QC) for quick detection where LSFF value chains break down and according measures through innovation in cost-effective testing and overall transparency.

Index

BioAnalyt

BioAnalyt GmbH (1/3)

anna.zhenchuk@bioanalyt.com – Managing Director
www.bioanalyt.com

Overview of our LSFF work

Focus geographies

Presence in 60+ countries, predominantly in low- or middle-income countries in Sub-Saharan Africa, such as NI, TZ and KE, and South Asia such as ID and PK.

In BioAnalyt, we empower local informed decision-making and quantifying of global malnutrition interventions.
*Active in LSFF since **2012.***

LSFF scope of work

BioAnalyt's commitment to LSFF programs is marked by our provision of advanced analytical technologies, such as the widely-used iCheck devices and new innovations like iCheck Modular and iCheck Connect. Our technologies ensure that local producers and stakeholders can directly contribute to and ensure the success of fortification initiatives through building local capacities to meet nutritional standards, thereby empowering local informed decision-making and enhancing impact of malnutrition interventions.

Our efforts, particularly through iCheck Connect's application in Pakistan, highlight our dedication to digitalizing nutrition programs. This initiative exemplifies our approach: direct engagement with local entities, responsive adaptation and integration of digital solutions with national fortification strategies, allowing for real-time data mapping. By simplifying data access and enhancing local capacities, BioAnalyt fosters ownership and impactful interventions against malnutrition, empowering communities globally through data-driven solutions.

Top 3 objectives

I. **Enhance Nutritional Accuracy and Efficiency:** Streamline the nutrient analysis process in fortified foods, ensuring that they meet nutritional standards efficiently with the aid of our iCheck devices and other technologies. This supports the production of consistently fortified foods that address specific micronutrient deficiencies in populations.

II. **Empower Decision-Making:** Provide stakeholders with real-time data and analytics to make informed decisions about fortification strategies, enabling quick adjustments and targeted interventions that address malnutrition and improve public health outcomes.

III. **Fostering Technological Advancements:** Continue developing and refining analytical tools and methods that push the boundaries of what's possible in field-friendly food analytics. Our goal is to lower barriers to effective fortification, making it more accessible and impactful worldwide, particularly in regions most affected by malnutrition.

Challenges and gaps

I. **Cost and Distribution Challenges:** We face the challenge of making our iCheck technology affordable and accessible in low-resource regions, which is crucial for verifying the nutrient content of fortified foods, primarily due to inconsistent demand and low scale.

II. **Education and Ongoing Training:** A significant challenge is ensuring stakeholders not only receive initial training but also continuous updates on best practices in using our technologies. Keeping pace with advancements is essential for effective decision-making based on real-time data. This requires a commitment to ongoing education in both the operation of our iCheck devices and the interpretation of nutritional data to optimize food fortification strategies.

III. **Funding for Innovation:** Continuous innovation is key to our mission but requires sustained investment. Securing ongoing funding for research and development is a significant challenge.

IV. **Adapting to Government Timelines and Frameworks:** A significant challenge we face is the varying speed and readiness with which governments adopt and update fortification regulations. Engaging with policymakers to understand and navigate these timelines is crucial for us, as it affects how quickly and effectively, we can contribute to the implementation of fortification programs and the broader goal of enhancing public nutrition.

Measurement Device
iCheck devices

Consumables
Ready-to-use reagent vials

Coordination areas

Support on Technology Enhancement: maintain funding to broaden solutions within innovative platforms, making analytics more cost-effective and accessible for food producers and food inspectors across regions, extending QA/QC testing beyond the current LSFF focus.

Integration and Standardization across regions: support to integrate our technology within national and regional fortification initiatives, forming partnerships with governments and NGOs to standardize the use of our vials for quality control and monitoring, ensuring fortified foods meet nutritional standards.

Guarantee continuous education: through educational programs to train stakeholders on the effective use of our technology, alongside enhancing our global distribution network, ensuring that food producers and monitoring authorities, especially in low-resource settings, adopt fortification monitoring practices.

Support for Global Distribution Networks: Investment in establishing and enhancing distribution networks for our consumables, especially in low-resource areas. This includes logistical support and subsidies to ensure that our technology is readily available where it is most needed.

iCheck Modular – BioAnalyt GmbH (2/3)

anna.zhenchuk@bioanalyt.com – Managing Director www.bioanalyt.com

Contribution to LSFF outcomes

BioAnalyt's iCheck Modular enhances LSFF by enabling on-site, rapid micronutrient testing with seamless data transfer, facilitating fortification adjustments and regulatory compliance. This portable device streamlines quality control, supports R&D, and fosters data-driven decision-making across the fortification value chain. Its sustainable design and operational efficiency directly contribute to improved nutritional quality of foods, aiding in the global reduction of micronutrient deficiencies.

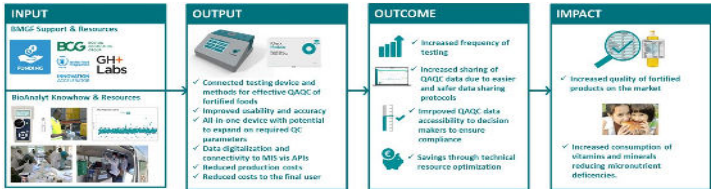
Results achieved

Widespread Use: our iCheck technology facilitates nutrient analysis in over 60 countries, directly supporting fortification programs.

Data-Driven Fortification: real-time data feedback offered by our devices empowers stakeholders to refine fortification strategies based on precise nutrient analysis.

Innovative Solutions: with the innovation of iCheck Modular, we expanded our testing capabilities and adaptability to meet the evolving needs of the LSFF landscape and beyond through:

- Multiplex Analytics: Simultaneous testing of multiple nutrients and quality parameters for comprehensive food insights.
- Enhanced UX and Connectivity: Intuitive interface and smart data processing make information accessible and actionable.
- Modular Design: Adapts to new testing needs, integrating modules for food safety, quality, and broader nutritional analysis, meeting evolving regulatory and quality requirements.
- Remote Updates: Ensures device and method currency with the latest standards, enhancing reliability and reducing downtime.
- Precision & Reliability: Advanced methods and low-hazard chemicals provide accurate results.
- Cost-Effective: Scalable testing solution reduces cost per test with increased volumes, supporting high-quality analytics affordably.



Theory of Change

iCheck Modular is set to transform the LSFF landscape by providing stakeholders with an accessible, efficient, and versatile tool for quality assurance and control. The platform significantly contributes to public health by ensuring foods surpass safety, quality, and nutritional standards, thereby meeting broader quality metrics

Action Pathway:

- **Deployment of iCheck Modular** devices with its capability for rapid, on-site testing of multiple micronutrients, reduces reliance on complex laboratory equipment, making nutrient analysis more accessible to all stakeholders involved in LSFF.
- **Empowerment through knowledge** by simplifying QA/QC process and covering a wider spectrum of food safety and quality standards, we empower food producers, government inspectors, and NGOs with the ability to make immediate, data-driven decisions regarding fortification processes.
- **Enhancing stakeholder collaboration** with iCheck Modular, bridging the gap between industry, regulators, and NGOs by providing real-time fortification data exchange. This unified platform facilitates timely, collective decisions on fortification practices, streamlining efforts to meet nutritional standards and enhancing the effectiveness of fortification programs.

The deployment of the iCheck Modular is a pivotal step towards achieving our shared vision of a world where fortified foods consistently meet nutritional standards, driving down micronutrient deficiencies and uplifting public health on a global scale.

Collaboration in our LSFF work "Circle of friends"

Partners

To achieve our outcomes, we collaborate with key partners like BMGF, WFP, GAIN, Technoserve, BASF, MC, DSM, CRS, as well as local industry and regulatory bodies.

Our project's aim is to develop the iCheck Modular, a comprehensive food testing device, enhancing nutritional intervention quality and reducing Micronutrient Deficiencies.

This effort is supported by expanding collaborations with platforms like DigiQAQC to streamline data for fortification programs.

Users

The primary users of our iCheck Modular device are food producers in industry, government food inspectors, monitoring NGOs and agencies, and researchers in nutrition. They utilize this portable device for on-the-spot quality checks of vitamin premixes and fortified foods, ensuring compliance with fortification standards. By offering rapid, accurate measurements of micronutrients, the iCheck Modular aids in enhancing the quality of nutritional interventions, fostering consumer trust, and contributing to the reduction of micronutrient deficiencies globally.

QuImpact – BioAnalyt GmbH (3/3)

Prof. Dr. Florian Schweigert - Managing Director
florian.schweigert@quimpact.org / www.quimpact.org

Contribution to LSFF outcomes

Capacity Building & Regulatory Support: Enhances regulatory methods and data management, delivers targeted training for key stakeholders to ensure fortified food quality and safety.
Innovation in LSFF & QA/QC: Developing new products and methods to boost fortification process efficiency. Offers customized innovation support and integration of cutting-edge technologies and practices.
Consulting for Strategic Fortification Initiatives: Provides advisory on validation studies, new product development, and evidence cases for QA/QC best practices.

Results achieved

Project Framework and Implementation: QuImpact has undertaken the project at the end of 2023 "Rapid Market Level Assessment on Micronutrient Status in Fortified Food " in various geographies, supporting the design and execution of a systematic approach for efficient assessment of micronutrients in fortified foods by May 2024:

- **India:** Iron in Fortified Rice Kernels (FRK) and Vitamin A in Oil.
- **Indonesia:** Vitamin A in oil.
- **Kenya:** Iron and Vitamin A in wheat and maize flour.

Areas of impact:
Establishing a Reliable Baseline: QuImpact is developing and applying a reproducible methodology for the rapid assessment of fortification quality.
Comparative Testing Methodologies: The project utilizes a dual-phase testing strategy, beginning with qualitative yes/no test kits for initial screening, followed by quantitative analysis using iCheck devices. This approach ensures accurate assessment of micronutrient levels against established fortification standards. The inclusion of comparative analyses with conventional laboratory methods validates the reliability of the data and effectiveness of the project's findings.
Comprehensive Reporting: Findings are being compiled into detailed reports that highlight compliance rates, identify gaps, and provide targeted recommendations to improve fortification practices. These reports are blueprints for the evaluations of regulatory compliance and directional guidance for future fortification strategies.

Theory of Action

QuImpact offers a unique blend of technical training, customized solution development, and fit-for purpose analytical practices, set to significantly advance the landscape of LSFF by equipping stakeholders with the necessary tools, knowledge, and innovations for quality assurance and effective monitoring of food fortification program. By focusing on capacity building, technological innovation, and rapid testing methodologies, QuImpact aims to substantially improve the effectiveness and impact of nutrition interventions.

Action Pathway:
-Deployment of customized training and technical assistance by providing tailored training on best analytical practices and state-of-the-art tools, as well as offering continuous technical assistance, QuImpact enhances the capacity of local stakeholders. **In 2023-2024 QuImpact trained over 120 governmental employees in Burkina Faso, Ghana, Ivory Coast & Senegal in partnership with CRS.**
-Innovation in monitoring and transparency through the development and implementation of innovative hardware and digital solutions by QuImpact facilitate real-time monitoring and transparency across the food value chain. **In 2024 QuImpact is driving the development of iCheck Modular by BioAnalyt GmbH with support from BMGF.**
-Rapid testing methodology implementation by leading adoption and scaling of the rapid testing approach, proven in Nigeria (2023), establish a reliable, cost-effective, and timely method for assessing micronutrient levels in fortified foods. This methodology significantly reduces dependence on laborious laboratory analyses, making quality assurance more agile and adaptable to the needs of different geographies. **In 2024 in partnership with NI and support from BMGF this approach will be tested in Indonesia, India and Kenya.**
-E**nhancing stakeholder collaboration** by fostering improved cooperation among food producers, government bodies, NGOs, and other key players in the LSFF landscape by offering a unified platform for knowledge transfer and technical assistance. This collaborative approach ensures that all parties are equipped to make informed, data-driven decisions, thereby optimizing fortification practices and achieving nutritional standards more effectively.

Collaboration in our LSFF work "Circle of friends"

Partners

To achieve our ongoing outcomes, we are collaborating with key partners like BMGF, Catholic Relief Services, NI, Technoserve, GAIN, PATH, IITDelhi, Koalisi Fortifikasi Indonesia, Africa Milling School, local accredited laboratories, MoH.
Key technical partner is BioAnalyt, with their expertise in training, analytical tools and innovations; as well as access to their wide network of connections to KOLs, labs, industry experts, and academia.

Users

QuImpact empowers each user group with tailored services that drive the success of food fortification efforts**:**
Food Industry Stakeholders: by providing essential support for achieving and maintaining fortification standards, ensuring safe and nutritious products.
Government Agencies: with methodologies that enable precise monitoring and enforcement of fortification regulations, safeguarding public health.
Monitoring NGOs: through equipping NGOs with the tools for accurate assessment of food fortification impacts, fostering transparency and advocacy.
Nutrition Researchers: with advanced testing capabilities support research efforts in improving fortification strategies and nutritional outcomes.

dsm-firmenich (1/2)

Team/ Authors: Yannick Foing, Yannick.Foing@dsm-firmenich.com & Yvonne Bakken Yvonne.Bakken@dsm-firmenich.com

Overview of our LSFF work

Focus geographies

Global with a focus on Asia, Latin America and Africa/Middle East BD, CO, EG, ET, ID, GH, NG, PK, PH, PE, RW, SN, TZ, ZA, KE, IN.

As innovators in nutrition and health, dsm-firmenich reinvents, manufactures, and combines essential nutrients and flavors for the world's growing population to thrive. We've been active in LSFF for decades, and started in 2005.

LSFF scope of work

We believe in a world where humans don't just survive but thrive. That's why we've made a bold commitment to end micronutrient malnutrition for 800 million vulnerable people by 2030, working in partnership with both private companies and the public sector – incl. governments, UN agencies, NGOs, donors etc. – to promote LSFF as part of the solution.

Driven by our commitment to improve lives through better nutrition, we've devoted our scientific expertise to create innovative essential nutrients and vitamin and mineral premixes designed to effectively tackle micronutrient deficiencies. We contribute to fortification of all staples including rice, flour, dairy, bouillon cubes, sugar, instant noodles and vegetable oils and margarine.

Top 3 objectives

I. Public health impact and thereby contributing to solving the micronutrient gap of at least 800 million people by 2030.
II. Develop high quality cost effective solutions to ensure fortified staples reach the intended effect in the human body.
III. Championing better compliance among producers/industry and supporting policy changes that promote efforts to scale up food fortification initiatives worldwide.

Challenges and gaps

I. Standards not in place, not enforced for LSFF or inadequate standards.
II. Quality compliance and monitoring lacking, thereby low number of adherence to national standards and consumers not having access to adequate fortification.
III. Lack of coordination between industry and government to make the LSFF ecosystem sustainable.
IV. Lack of fortification equipment to meet local standards.
V. Lack of laboratories and human resources expertise for monitoring the standard.
VI. Low understanding or awareness from consumers on the benefits of fortified staples.

Coordination areas

I. Quality & monitoring.
II. Government dedication (leadership, messaging, policy change, budget availability) to enable business to adequately fortify, and recognize the ones that do.
III. Public awareness of the benefits of fortification.

Dsm-firmenich (2/2)

Team/ Authors: Yannick Foing,
Yannick.Foing@dsm-firmenich.com & Yvonne Bakken
Yvonne.Bakken@dsm-firmenich.com

Contribution to LSFF outcomes

We ensure our programs successfully reach those in need with high quality and cost-effective innovative nutrition solutions that are palatable, safe and efficacious. This supports the seamless delivery of fortified foods that align with local preferences and dietary habits and are effective at tackling micronutrient deficiencies.

Results achieved

We work closely with our partners to ensure that our products successfully reach those in need. Our superior market-ready and premix solutions are palatable, safe, and efficacious, supporting the seamless delivery of fortified foods aligning with local preferences, regulatory and quality standards, and dietary habits. We're currently reaching 677 million people with improved nutrition through:

i. Rice fortification: together with our partners we've successfully developed the technology and been scaling up rice fortification in LMIC (more than 20 countries), providing technical advice to governments and scaling-up production globally with a focus on local for local. Case example: workforce nutrition for migrant workers in Singapore: Fortified rice leads to micronutrient status improvements in workforce nutrition study | dsm-firmenich Talking Nutrition
ii. Leading innovator in all fortified staples (rice, flour, edible oil, sugar, noodles, dairy, bouillon): developed and implemented technologies that helps increase reach and efficacy of fortified staples vehicles by Developing technology that enables the same cooking and consumption methods with no taste difference to ensure good adherence and, thereby, increase micronutrient intake.
iii. Worked closely with leading public sector agencies to jointly advocate for the scale up of LSSF.

Theory of change

Our LSFF activities are set to create public health impact with effective, quality fortification.

To improve quality of life for those most in need, we're dedicated to help close the micronutrient gap for all. Tapping into our extensive experience in the field of public health nutrition, our scientific experts have developed high-quality solutions tailored to deliver large-scale essential nutrition in the most effective and economical way. With these cost-effective nutrition interventions, we've made an ambitious commitment at dsm-firmenich to end micronutrient malnutrition for 800 million vulnerable people by 2030.

Collaboration in our LSFF work "Circle of friends"

Partners

- The UN World Food Programme
- The Bill and Melinda Gates Foundation
- Micronutrient Forum
- Rockefeller Foundation
- Food fortification Initiative
- UNICEF
- GAIN
- Nutrition International
- World Vision International
- Partners in Food Solutions

Users

Industry: Micronutrient premixes for LSFF to increase the intake of vitamins and minerals in the general population.
All these initiatives in LMIC

Check us out https://www.dsm.com/human-nutrition/en/nutrition-improvement.html to learn more about our initiatives in LSFF

East, Central and Southern Africa Health Community

Fostering Regional Cooperation for Better Health

East, Central and Southern Africa Health Community

Doreen Marandu <dmarandu@ecsahc.org>

Overview of our LSFF work

Focus geographies

East, Central and Southern Africa (ECSA) region

ECSA-HC promotes and encourages efficiency and relevance in the provision of health services in the region through advocacy, capacity building, coordination, inter-sectoral collaboration, and harmonization of health policies and programs

LSFF scope of work

ECSA-HC brings capacity to support countries providing policy guidance, strengthening monitoring and quality assurance systems of food fortification programs and the capacity of ECSA countries to improve the implementation of LSFF programs.

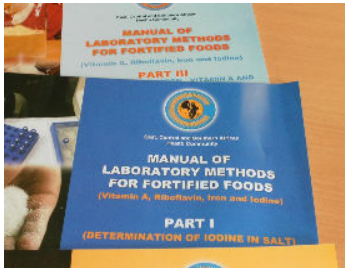
Through its mandate ECSA HC supports adoption, and implementation of global, regional, and national policies in support of LSFF.

Key objectives

I. Provide policy guidance and enabling environment on designing large scale food fortification programs,
II. Strengthen monitoring and quality assurance systems of food fortification programs.
III. Assess the coverage and impact of implemented food fortification programs.
IV. Strengthen capacity of ECSA countries on quality assurance systems and data quality on food fortification.
V. Facilitate inter country learning and knowledge exchange to enhance implementation of LSFF programs.

Challenges and gaps

I. Low compliance of fortified foods to the national standards, Exclusion of small and medium scale millers in national food fortification regulation,
II. Dependency of importation of fortificants/ premixes and maintenance of equipment,
III. Inadequate capacity of laboratories to monitor compliance of fortified foods,
IV. Weak inspection and monitoring at production and market levels
V. Poor coordination and collaboration among stakeholders
VI. Inadequate skilled personnel as inspectors and laboratory technicians



Coordination areas

Production, Quality Assurance/ Quality Control (QA/QC), and Food Safety; Inspection and Enforcement; and consumption Monitoring and Program Impact.

Partnerships and Resource mobilization

ECOWAS Commission (1/2)

Lassané KABORE, ECOWAS Industry Directorate. Email: lkabore@ecowas.int

Overview of our LSFF work

Focus geographies
BJ, BF, CV, CI, GH, GM, GN, GW, LR, ML, NE, NG, SL, SN, TG

Economic Community of West African States (ECOWAS)
*Active in LSFF since **2023***

LSFF scope of work (or interest/connection)

We implemented a Regional Steering Committee to coordinate and review efforts of the region in terms of Large Scale Food Fortification programmes and projects.

As a regional organization, we contribute to food fortification by supporting development of standards, building capacities for their implementation, control and inspection of fortified food.

Top 3 objectives

I. Coordinate efforts of food fortification in West Africa.
II. Support development and harmonization of regional standards and technical regulations on fortified food.
III. Support the establishment of required quality infrastructure for testing, analysis and certification to ensure that fortified food are compliant with adopted harmonized standards.

Challenges and gaps

I. Lack of availability of National standards.
II. Lack of availability of National Technical Regulations.
III. Lack of effective verification/ control.
IV. Even if they are adopted, standards and regulations are not fully implemented or not implemented at all in some cases.

Coordination areas

I. Harmonise Approaches.
II. Identify more vehicles for enrichment.
III. Ensure an intervention covering all aspects going from the standards development to the plate.

ECOWAS Large Scale Food Fortification Programme - *ECOWAS Commission (2/2)*

Lassané KABORE, ECOWAS Industry Directorate. Email: lkabore@ecowas.int

Contribution to LSFF outcomes

Development, adoption and implementation of standards and technical regulations.

Results achieved

I. Regional Large-Scale Food Fortification Technical Coordination Framework established.
II. Review of existing National Standards on edible oil, enriched wheat flour and iodized salt.
III. The regional Harmonized Standards are assessed and needed changes are identified.

Theory of action

Activities

Establishing a regional framework for coordination of all actions related to food fortification

Using regional harmonized standards as a medium

Results

Build on the existing processes

Ensure that fortification processes are made in a safe manner

Fortified food can move without technical barriers in the region.

Impacts

Food/ vehicles is efficiently fortified in a safe manner

Movement of fortified food across ECOWAS Member States

Collaboration in our LSFF work "Circle of friends"

Partners

In this framework, with the support of **UNICEF**, we are currently reviewing the harmonized standards on **edible oil, enriched wheat flour and iodized salt** in collaboration with **WAHO** and partners such as **HKI, CRS, WFP, WHO, OCDE, USAID-AFFORD, IFAD, GAIN, NI, SUN, IGN, TechnoServe, Scaling up nutrition, save the children, TNS.**

Users

Private sector actors/ manufacturers, Regulators, Non Governmental Organizations. They use them for production, control and certification.

International Life Sciences Institute ILSI MESOAMERICA (1/2)

Hannia Leon Leon. MSc. MPM
executivedirector@ilsimesoamerica.org

Overview of our LSFF work

Focus geographies

GT, SV, HN, Ni, DR, Mx, PA, CR, Ar, Ve, Co, Pe, Ch, Ec, Br, Ur, Py, Bo and Mx

We believe in evidence-based nutrition and its impact on all the sectors involved in the ecosystem associated with food fortification.

LSFF scope of work

ILSI ME is committed with the global principles of scientific integrity, brings together experts from academia, governments and industry to generate, collect, analyze and disseminate objective, accurate and transparent science on food fortification and nutrition.

The Mesoamerican region has high rates of malnutrition in both children and women of childbearing age and in older adults, as well . It is our interest that researchers in the region carry out projects that provide data to be used as a basis for intervention projects, in collaboration between sectors and in connections between countries allow for efficient use of resources.

Capacity building, collaboration and connection are our focus.

Top 3 objectives

I. Generate capacity building projects for people involved in decision- making processes, food regulation and the productive sector in order for the ecosystem to have the knowledge for the implementation of effective and efficient FF programs.
II. Collect and communicate existing information to generate materials that summarize not only the data but also the lessons learned and good practices. There are a lot of diagnostics and few effective programs.
III. Align our actions with the objectives and projects carried out by international organizations in this matter, such as Codex Alimentarius, WHO, UNICEF and UN.

Challenges and gaps

I. Not all people involved at the institutional level are nutrition professionals or have advisors in this matter, which limits the understanding of its impact on the development of the population. Institutional officers change all the time as well.
II. One of the most important challenges is that in our countries the productive sector is composed by artisanal producers largely or those with little access to technologies and science, which is a limiting factor to implementing regulation in FF.
III. The relationship between the productive and regulatory sectors is a challenge in Latin America. In countries like CR where the relationship is good, great success has been achieved in FF.

Coordination areas

I. **Nutrition evidence – based** to achieve regulatory programs and foods in line with real needs.
II. **Continuous capacity building** that allows raising awareness and training all people involved.
III. **Coordination and collaboration** between the public and private sector and vice versa for all actions of the parties involved to achieve their objectives efficiently.

FF capacity building webinar series and Gt symposium
Nutrients and health, open virtual course
FF in CA and Caribbean, publication – ILSI Mesoamerica (2/2)

Contribution to LSFF outcomes

I. Increased awareness of food fortification principles.
II. Improved technical proficiency
III. Enhanced collaboration among stakeholders.
IV. Promotion of Healthy Eating Habits.
V. Behavioral Change.
VI. Communication Skills.

Results achieved

I. Participants gain a deeper understanding of the role of different nutrients in maintaining overall health, acquire knowledge about food sources and they explore the connection between nutrition and chronic diseases.
II. Development of educational materials: video recordings of conferences and the monograph.
III. Establishment of support networks between the national FF commissions.
IV. Research and Analysis: Researchers can use compiled data to conduct in-depth analyses, exploring trends in fortification practices, assessing the impact of fortification on health outcomes.
V. Regulatory Compliance: Data compilation supports regulatory bodies in monitoring compliance with fortification standards.

Theory of change

The stakeholders involved in the food fortification capacity-building program can have a shared understanding of the program's goals, strategies, and expected outcomes. It serves as a valuable tool for planning, implementation, and evaluation, fostering transparency and accountability throughout the program's lifecycle. The training program effectively contributes to positive changes in individuals and communities as:

- Positive changes in behavior, adopt healthier dietary practices.
- Prevention of nutrient deficiencies by promoting awareness of specific nutrients that are crucial for overall health.
- Enhanced health literacy, enabling them to critically evaluate nutritional information

Over time, the cumulative impact of improved nutrition knowledge and practices may contribute to long-term health benefits, including a lower incidence of chronic diseases, improved longevity, and a higher quality of life. Regulations based in scientific evidence as good practice in the region is part of the outcomes in the medium term.

Collaboration in our LSFF work "Circle of friends"

Partners

INCAP
ILSI – Latin American Network in Nutrition for Research and collaboration.
Scientists from the academia, governments and industry from Latin America, Europe and US.
Academics experts in Nutrition, food technology and medicine from the universities of the region.
ILSI ME - Nutrition and wellbeing committee

Users

I. Government Agencies
II. Food industry Professionals
III. Researchers and Academia
IV. Non-Governmental Organizations (NGOs)
V. Media and Communication Professionals

https://ilsimesoamerica.org/event/webinar-bases-en-la-fortificacion-de-alimentos/ ;
https://ilsimesoamerica.org/publication/fortificacion-de-alimentos-para-centroamerica-y-el-caribe/

Hannia Leon Leon. MSc. MPM
executivedirector@ilsimesoamerica.org

Indian Institute of Technology Delhi (1/2)

Prof. J.K. Sahu, IIT Delhi
jksahu@iitd.ac.in

Overview of our LSFF work

Focus geographies
India

IIT Delhi is leading a consortium of prestigious higher learning institutes to enhance nutrition by applying innovative research for strengthening the fortified rice value chain.

LSFF scope of work

Managing a collaborative initiative of "institutes of national importance" to generate evidence, develop new technologies, build capacity, and improve quality of rice fortification.

Areas of work include: Premix standards and accreditation; FRK quality improvement; new FRK varieties; indigenous machinery; blending optimization; novel bio-preservatives; rapid test kits; studies on impact of storage, packaging material, additives, cooking techniques, etc. on micronutrients retention; AI & ML solutions for supply chain optimization; quality monitoring frameworks; capacity building toolkits.

Top 3 objectives

I. Leverage Indian higher institutes for cutting-edge R&D and technological innovation to support successful implementation of rice fortification initiatives.
II. Foster a sustainable enabling environment with multi sectoral partnerships for rice fortification.
III. Knowledge and technical assistance hub to strengthen the rice fortification value chain.

Challenges and gaps

I. Inadequate R&D: lack of low-cost rapid testing kits for measuring micronutrients in FRK and FR; reliance on imported machinery especially for FRK.
II. Low human resources and technical capacity: inadequate knowledge and capacity on rice fortification in the industry.
III. Suboptimal compliance and quality gaps: suboptimal compliance with standards; limited monitoring frameworks/ audit mechanism to ensure quality production.
IV. Insufficient engagement among multiple stakeholders, especially industry: lack of multi-stakeholder forum to use the rice fortification ecosystem's combined capacity and knowledge optimally by developing better linkages.

Coordination areas

I. Coordination with key government agencies / departments for identification of priority areas to support.
II. Collaborative research with academic and research institutions, and partnerships with innovators for scale up.
III. Coordination with LSFF community for knowledge sharing and leveraging synergies
IV. Aligning with initiatives of the government (proficiency testing mechanism for testing labs) and development partners (M4N).

Innovation Hub for Rice Fortification (IHRF) - IIT Delhi (2/2)

Prof. J.K. Sahu, IIT Delhi
jksahu@iitd.ac.in

Contribution to LSFF outcomes

- Providing technical assistance and capacity building to stakeholders.
- Generating research-based evidence.
- Developing innovative and cost-effective technologies, and products.
- Knowledge Hub for rice fortification.
- Increased Govt., NGO & private sector engagement and investment.

Results

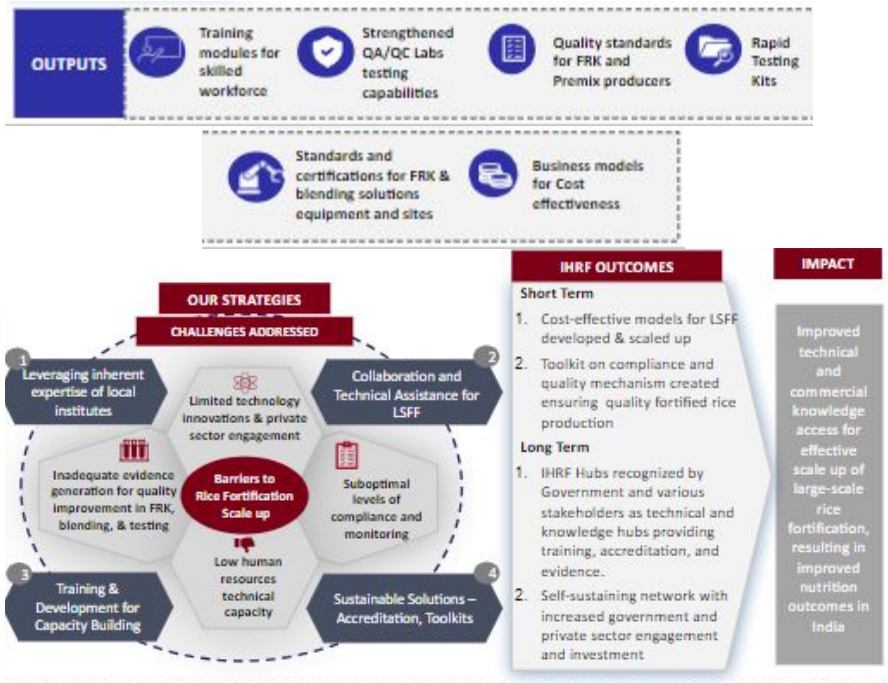
Innovative technologies and methods are being used for development of several field-level rapid test kits for micronutrient detection – expected to be deployed in the coming 12-18 months.

Technical Assistance (TA) is regularly being provided to industry to address their challenges and issues, through online and physical interactions and site visits. A 24-hour online Rice Fortification Resource Centre (RFRC) has also been set up to provide time-bound advice and solutions from experts.

Technical seminars organized on latest developments in rice fortification.

Skill certification pack developed on rice fortification; hands-on training provided to FRK manufacturers and government food testing labs.

Theory of change



Collaboration in our LSFF work "Circle of friends"

Partners

IHRF collaborative hubs - Indian Institute of Technology Delhi, Indian Institute of Technology Kharagpur, National Institute of Food Technology & Entrepreneurship Management (NIFTEM) Kundli, Central Food Technological Research Institute (CFTRI) Mysuru, and Food Industry Capacity Skill Initiative (FICSI) New Delhi.

Regular interaction with PATH, WFP, NI.

Linkages developed with TechnoServe, Fortify Health, DSM.

Users

Scientific evidence helps policymakers in developing/refining standards & guidelines.

Help the premix and FRK manufacturers and food testing labs to follow standard regulatory compliance.

Improved monitoring and quality assurance.

Kenya Bureau of Standards (KEBS) (1/2)

Esther Ngari, Managing Director
info@kebs.org or md@kebs.org

Overview of your LSFF work

Focus geographies for our LSFF work
Kenya

KEBS in the National Standards Body in Kenya responsible for development and maintenance of National standards and conformity assessment.

LSFF scope of work

KEBS is a key regulator responsible for enforcement of Kenya Standards on fortified wheat flour, maize flour and edible oils and fats which are within the scope of LSFF.

KEBS supports the government in ensuring provision of safe and nutritious products to the consumers. KEBS is responsible for certification of flours and oils that comply with relevant standards. KEBS is administering the national fortification logo.

Top 3 objectives

I. Achieve at least 80 % compliance of maize flours, 90 % of wheat flour and 95 % of edible fats and oils.
II. Train millers and refineries to be able to build and implement in house quality systems.
III. Establish proficiency test (PT) scheme within the country for fortified products to improve testing of fortified products.

Challenges and gaps

I. Small and medium enterprises have a challenge of consistency in compliance to fortification and strained laboratory equipment capacity to support timely and continuous testing.
II. Limited financial resources to train stakeholders such as refineries and millers.
III. Limited financial resources to run several PTs.

Coordination areas

I. Improved public private partnerships.
II. Behaviour change campaigns targeting consumer to have preference for fortified foods.
III. Scheduled micronutrient surveys to demonstrate positive impact of fortification.

Compliance with mandatory fortification standards for Kenya (2/2)

Esther Ngari, Managing Director
info@kebs.org or md@kebs.org

Contribution to LSFF outcomes

Enforcement of mandatory fortification standards as specified in the legal notice 157 of July 2015.

Results achieved

I. Improvement in compliance of fortified products from average of 17% and 28% for maize flour and wheat respectively in 2017 to 48 % and 85 % in 2021. (Surveillance report of 2023 to be released soon).
II. Training of over 1,000 public health officers on interpretation and implementation of fortification standards.
III. Training and development of analysts both in government labs and private labs on analysis of fortified foods.

Theory of change

Activities

Development/ review of Kenya standards

Look at number of fortified products with Kenya Standards.

Conformity assessment

Look at number of firms with valid standardization mark and Food Fortification mark (safety and nutrition products.

Outcome

Population accessing and consuming fortified.

Collaboration in our LSFF work "Circle of friends"

Partners

Main collaborating agency if Divisions of Nutrition and that of Food Safety within the Ministry of Health.

Users

Private sector (Industries) – Implementation of standards and use of logo to assure consumers of safety and quality of the products.

Nutrition International (1/2)

Kristin Hall, Global Portfolio Director, LSFF
khall@NUTRITIONINTL.ORG

Overview of our LSFF work

Focus geographies
BD, IN, ID, PK, PH, ET, KE, TZ, SN, ZM, MG

A trusted ally to governments, a comprehensive technical partner, and a global advocate for improved health and nutrition via food fortification.

LSFF scope of work

Support more and better diets at a large scale, affordably (improve nutrient intake, reduce micronutrient deficiencies) through:

- scaled programming nationally and sub-nationally through open markets and/or social safety nets based on a public health analysis and best practice.
- research and development to test potential solutions to key problems that are holding back the public health impact of LSFF.
- strengthening the global fortification ecosystem by shaping global guidance and practice, and advocating for its prioritization.

Top 3 objectives

I. **Advocate** with decision makers for prioritization of mandatory LSFF by governments, improvement in capacity and resources within the industry, effective and strengthened regulation and enforcement,
II. **Generate evidence** to support strengthening of the food fortification guiding structures, including policies, legislation, and standards, and
III. **Provide technical assistance** to governments and industry partners to strengthen and sustain the production and availability of adequately and quality fortified foods by using existing market-based platforms and social safety net programs to reach populations at scale.

Challenges and gaps

Challenges: i) Pakistan: 'Loose oil'; wheat flour market dynamics; high inflation, insecurity; natural disasters; ii) India: Anti-fortification civil society media campaign, government emphasis on rice with little attention on DFS, TiO2 alternatives (DFS), lowering of FA standards; iii) Ethiopia: Insecurity and conflict disrupting supply chains and operations; impurities in salt supply chain.
Gaps: i) Research: Rice and zinc fortification effectiveness; impact of multiple fortified foods in same population and oil fortification on Vitamins A & D; stability/retention of fortificants in high moisture salt; ii) Fortificant supply chain: Folic acid import to Ethiopia; DFS-IoFA efficacy; encapsulated DFS-IoFA product development and consumer acceptability; digitization in QA/QC and government ownership.

Coordination areas

- Joint advocacy and profiling.
- Domestic resource allocation and innovative financing.
- Climate action plans.
- Harnessing the opportunity of global food exports.
- Regional coordination and harmonization.
- Integration of USI and food fortification into food safety and quality systems.
- Gender-based approach to LSFF.

Nutrition International (2/2)

Kristin Hall, Global Portfolio Director, LSFF
khall@NUTRITIONINTL.ORG

Contribution to LSFF outcomes

- Improved dietary quality and reduced micronutrient inadequacies within populations;
- Strengthened and sustained regulatory environment for fortified foods including alignment of national standard with WHO guidance;
- Improved and sustained capacity (both technical and operational) of government and industry ecosystem to ensure production and availability of quality and adequately foods and fortified foods;
- Fortified food product development, market introduction, and scale up through market mechanisms or social safety net programs; and
- Improved access to adequately fortified food items through social safety net programs or open market systems.

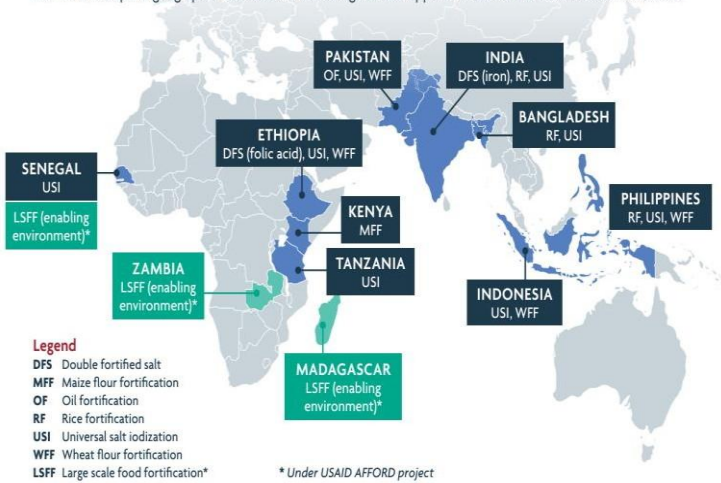
Results achieved

Cumulative reach and impact figures for 2015- 2023:

I. 17 million cases of anaemia averted among women of reproductive age,
II. 1 million births protected from neural tube defects,
III. 3 million mental impairments averted,
IV. 459 million additional people with access to fortified foods,
V. 576 million additional people consuming adequately iodized salt, and
VI. Explored use of digital technologies in food fortification programming, generated novel evidence, undertook critical analysis of USI program design, and invested in health and economic impact assessments for food fortification.

NUTRITION INTERNATIONAL'S FOOD FORTIFICATION FOOTPRINT

Nutrition International's fortification portfolio is large and varied, as seen in the graphic below. We continue our work to expand geographies and vehicles and to tighten our approach to offer the best nutrition outcomes.



Collaboration in our LSFF work "Circle of friends"

Partners

Public sector: National and sub-national governments and Food Fortification Alliances, Academic and Research institutions.
Private sector: Industry stakeholders- producers, millers and their associations, premix producers, machine, equipment and reagent suppliers, and laboratories.
Others: International organizations and think tanks, consumer rights agencies.

Users

General population gain access to adequately fortified foods;

Government entities ensure efficient and effective legislation, implementation of mandatory LSFF programs; and
Industry stakeholders run successful business models for quality and adequately fortified foods.

Program for Appropriate Technology in Health (PATH) - (1/2)

Neeraj Jain, Rohini Saran, Danie Shajie
fortirice@path.org

Overview of our LSFF work

Focus geographies
IN, MM, BR, BT, KH, BI, LK

PATH, an international non governmental organization (INGO), advances health equity through innovation and partnerships.

Active in LSFF (rice fortification) ***since 1997***

LSFF scope of work

A leader in global health innovation, PATH is at the forefront of finding and implementing effective approaches to boost and enhance rice fortification across the world. We play a catalytic role in developing markets for fortified rice to reduce micronutrient malnutrition.

Besides developing a cost-optimized model for early market introduction of fortified rice, we are introducing Digital Public Goods for quality assurance of fortified rice and to strengthen fortified rice supply chain.

Our current technical assistance to rice fortification in public and private sector extends to India, Myanmar and Sri Lanka.

Top 3 objectives

I. **Enhance affordability and accessibility:** Technical and business viability for integrating fortified rice into small-scale milling environments, cost optimization, global connect and customized toolkit and trainings.

II. **Extend assistance to public and private sectors for implementation:** Generate evidence, technical assistance, support for policy and standard development with local governments, formation of national fortification alliance to create sustainable markets.

III. **Improve awareness:** Develop and launch social marketing efforts for fortified rice to enhance demand by consumers.

Challenges and gaps

I. **Knowledge Gap:** Lack of clear and easily accessible information on fortified rice production, its costing and operational challenges.

II. **Quality:** Ensuring quality of the fortified rice reaching to the last mile. Ensuring accurate tracking of fortified rice from production to consumption to guarantee safety and efficacy.

III. **Awareness & Acceptance:** Educating consumers about the benefits of fortified rice and addressing cultural and taste preferences for widespread adoption.

Coordination areas

I. Use of digital tools to enhance quality and compliance of fortified rice.

II. Global evidence generation and dissemination through peer-reviewed journals, policy briefs, reports, conferences.

III. Linkage between industry and local governments, enabling partnerships.

Scaling up Rice Fortification - (2/2)

Neeraj Jain, Rohini Saran, Danie Shajie, fortirice@path.org

Contribution to LSFF outcomes

Enhanced impact through rice fortification initiatives as a complementary strategy filling nutrition gap. Use of digital intervention for strengthened efficiency.

Strengthened Food Systems through collaboration with governments & industries to strengthen supply chain and improve the efficiency and resilience for achieving food security.

Increased Demand Generation through targeted nutrition awareness and strengthened regulatory compliance and monitoring.

Results achieved

I. **600 million +** beneficiaries reached with fortified rice in 16 Indian states through Social Safety Net Programs (SSNPs) from 2021 to February 2024.

II. **18- fold increase** in Fortified Rice Kernel manufacturing capacity in India (from 27,000 metric tons in August 2021 to 497,000 metric tons in December 2023).

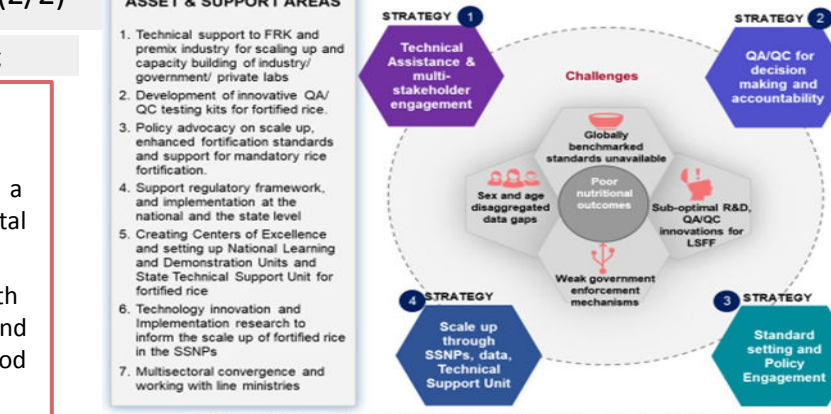
III. **Fortified Rice Quality Management System (FRQMS)** introduced to traceability, quality assurance and quality control of fortified rice at every stage of the supply chain, from premix production to its distribution to beneficiaries.

https://www.path.org/our-impact/resources/lessons-learned-introducing-fortified-rice-myanmar/
https://www.path.org/our-impact/articles/four-principles-for-large-scale-rice-fortification/

THEORY OF CHANGE – Rice Fortification

ASSET & SUPPORT AREAS

1. Technical support to FRK and premix industry for scaling up and capacity building of industry/ government/ private labs
2. Development of innovative QA/ QC testing kits for fortified rice.
3. Policy advocacy on scale up, enhanced fortification standards and support for mandatory rice fortification.
4. Support regulatory framework, and implementation at the national and the state level
5. Creating Centers of Excellence and setting up National Learning and Demonstration Units and State Technical Support Unit for fortified rice
6. Technology innovation and Implementation research to inform the scale up of fortified rice in the SSNPs
7. Multisectoral convergence and working with line ministries



OUTCOMES

1. Reduction in micronutrient deficiencies among vulnerable groups particularly WRA and children.
2. Increased availability and consumption of quality fortified rice in SSNP and open market
3. Low-cost, easy to use, handheld testing devices are introduced into an efficient government monitoring system
4. Increased multi- sectoral engagement and enhanced sustainability of rice fortification efforts
5. Data gaps bridged via innovations like digitized inventory management, low-cost blending units introduced
6. Roll out of strengthened standards and increased awareness on benefits of fortified rice

IMPACT

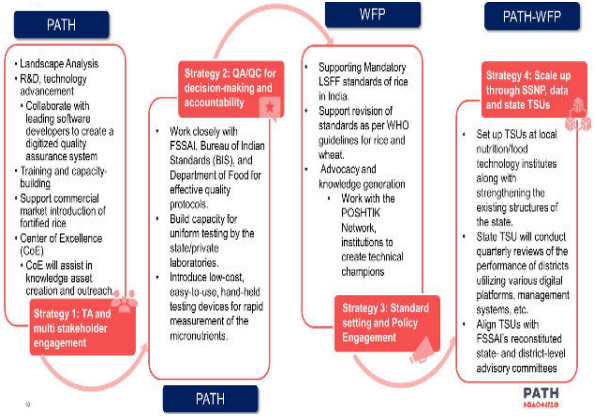
Scale up quality fortified rice access and uptake in SSNPs to prevent and reduce Iron Deficiency Anemia

Cross Cutting

Partnerships with Government technical agencies and bodies | Supply & Demand Alignment | Convergence with National Missions for food safety | Steering Committee in collaboration with Country Coordinator | Knowledge Management, IPE, Dissemination and Gender Integration

Outputs

Activities



Collaboration in our LSFF work "Circle of friends"

Development partners: WFP, India and Sri Lanka, GAIN, NI, GIZ, TechnoServe and others.

Stakeholders: Govts. of India, Bhutan, Myanmar, Sri Lanka, country specific local manufacturers and suppliers, Academia, Think Tanks, Associations, Networks, Consumer Groups.

Users: All stakeholders in large-scale food fortification (LSFF) - governments, donors, civil society organizations (CSOs), academic institutions, market actors, and public sector.

The Global Alliance for Improved Nutrition (GAIN) (1/2)

Penjani Mkambula, GAIN
pmkambula@gainhealth.org

Overview of our LSFF work

Focus geographies

BD, BJ, ET, IN, ID, MZ, NG, PK, RW, TZ, UG

Healthier diets for all, especially the most vulnerable
More sustainable and safe food systems

LSFF scope of work

Supporting Global, Regional and National partners to improve availability and quality of fortified foods. Our work includes data and knowledge generation, support to public/private sector, advocacy, fortification inputs supply chains and gender mainstreaming.

GAIN is committed to the 2030 SDGs agenda and aims to ensure at least 1.2 billion people have access to fortified foods, at least 3 governments mandate LSFF and 3 establish digital monitoring tools by 2025.

GAIN LSFF Projects: Digital QAQC and EE; GAIN Premix Facility; Advocacy; New business models; GFDx, CASCADE, Nourishing Food Pathways; School-feeding, Social protection.

Top 3 objectives

I. **Advocacy** on unfinished agenda of LSFF, alliances and mobilization to mandate or establish new food fortification programs where data warrants it and addressing gaps in existing programs.

II. **Product and Systems Innovations** and Technical Assistance to improve Compliance and Coverage e.g., Digital QA/QC, GAIN Premix Facility, Accountability mechanisms, Delivery models (institutional and SSNPs), New product opportunities & scale up emerging opportunities, Micronutrients Innovation Facility; Policy Innovations, and complementarity between LSFF and biofortification; incentive structures for public/private sector, political economy for LSFF.

III. **Data**: research and evaluation of programs; coverage/impact surveys, micronutrient deficiency data, dietary data, innovations on market, household data collection, LSFF knowledge generation and translation.

Challenges and gaps

I. **Enabling environment**: poor monitoring and enforcement leading to a lack of level playing field; poor coordination and governance, fortification fatigue.

II. **Business case:** lack of industry incentives; alternatives to products with fragmented industry structures.

III. **Data:** lack of impact evaluations; lack of MND, quality, coverage, compliance, data; subnational level data.

Coordination areas

I. Cross government alignment and coordination; various ministries, departments and agencies; policy, implementation, monitoring etc.

II. Alignment between development partners; implementing agencies, donors.

III. Enhanced multi sectoral coordination at national level; reimagining national alliances (NFA 2.0) or other platforms and regional coordination (e.g., through regional economic communities, others).

Further Reading and Resources can be found here.

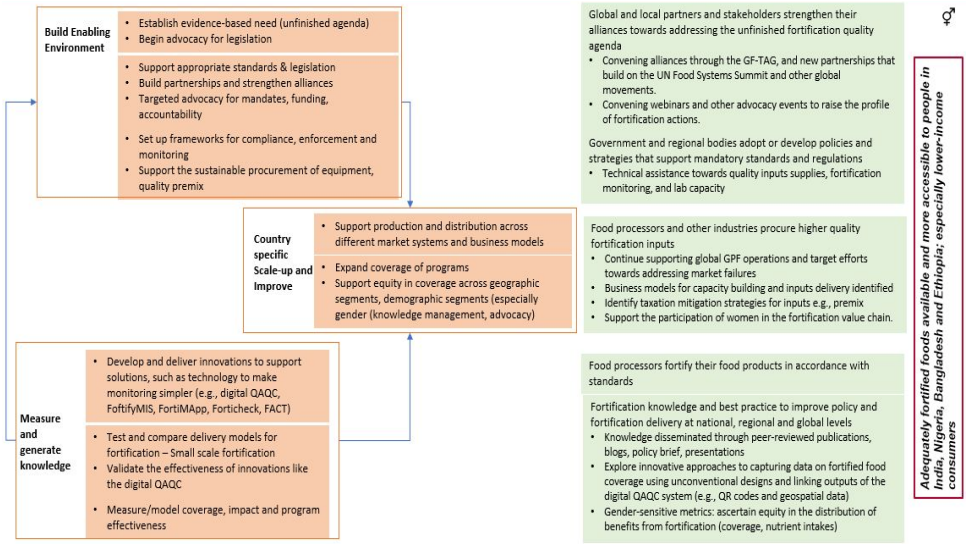
Digitalization of Fortification Quality and Strengthening Enabling Environment for Fortification - GAIN (2/2)

Penjani Mkambula, GAIN
pmkambula@gainhealth.org

Contribution to LSFF Outcomes

Digital QA/QC: MVP for traceability of vitamin A developed, pilot-ready
Ethiopia: Contributed to Mandatory Legislation for oil & wheat; est. premix dist. system/rev. fund; Supported EFDA lab accreditation to ISO17025
India-Coordination: Secretariat established and common results framework across development partners
India: Established a Centre of Excellence (NIFTEM), e-learning on oil LSFF and the fortification of 10.7m tons of oil reaching > 1 billion people
Nigeria: Reclassification of micronutrients from finished products to raw materials, led to reduction in the excise duty, from 20% to 5%
Bangladesh: High-level commitment and clear government directive to phase out bulk oil sold in drums; inclusion of vitamin D to the oil standard
Advocacy: GF-TAG mobilised >70 organizations to support WHA resolution
Knowledge: Coverage and market survey methods
GPF: >50 approved sites, cumulatively >$85m premix to 55 countries
Reach: Supported programs reached over 1.3 billion people in 2023.

Theory of Change



Results achieved

I. **Developed a global good country-owned digital solution** that enable mills and authorities to generate, govern, share, and utilize accurate and traceable data on food fortification quality within factories and markets.

II. **Strengthened enabling environments for LSFF** in India Bangladesh, Ethiopia and Nigeria. Fortification inputs supply chains; TA to government & industry, Advocacy, coordination and alliance building, Knowledge generation and dissemination.

III. **India Coordination Secretariat Established** for BMGF grantees.

IV. **Serving the broader fortification community** through: Global advocacy / alliance-building; Knowledge generation/ assets & implementation research ; GAIN Premix Facility operations.

Collaboration in our LSFF work Our "Circle of friends"

Partners

BASF, DSM, TNS, HPE, BioAnalyt, Camelot, GH Labs, Governments of Bangladesh, India, and Nigeria; oil producers; civil society organizations; LSFF community, GF-TAG. Together, we work to develop and pilot a digital system for food fortification traceability and strengthen the enabling environment.

Users

The Digital fortification traceability system is used by producers, premix companies, and government. Our outputs on enabling environment serve industry, government, donors, implementers, and advocates for LSFF program evidence, advocacy, design, execution, and evaluation.

Further Reading and Resources can be found here.

UNICEF Ethiopia (1/2)

Tesfaye Chuko
UNICEF Ethiopia (tchuko@unicef.org)

Overview of our LSFF work

Focus geographies
Ethiopia

In line with the Ethiopia National Nutrition Strategy, UNICEF Ethiopia has supported LSFF since 2008.

LSFF scope of work

UNICEF Ethiopia is providing support for LSFF by establishing a system to implement fortification standards, building capacity within industries, and coordinating various stakeholders that provide support to the LSFF. One of the key activities to advance LSFF in Ethiopia is the development of a national LSFF plan of action.

System strengthening on the national LSFF coordination, regulatory enforcement, evidence generation, and industry capacity building.

Key Objectives

I. Support and strengthening of the national food fortification coordination by key government officials to ensure the implementation of mandatory standards. Provide support for the convenings of meetings by the National Food Fortification Steering and Technical Committees, which will help stakeholders discuss and make crucial decisions.
II. Strengthen the government's capacity to manage the Food Fortification Information System and provide technical support to industries.
III. Support regulatory inspectors with equipment and training to enforce mandatory food fortification standards and build regulatory capacity.

The I-CHROMs procured by UNICEF and donated to EFDA.


EFDA inspectors training on oil testing using I-CHROMA, May 2020

Challenges and gaps

I. Industry input: lack of a sustainable supply of premix in Ethiopia, which is further complicated by a shortage of forex. To address this, a feasible strategy needs to be explored that defines the role of stakeholders in ensuring a sustainable supply of premix.
II. Industry capacity development: require technical support in all aspects of food fortification to build their capacity.
III. Government capacity development: Coordination, Monitoring and evaluation, food fortification information system, and regulatory enforcement need to be strengthened.

Coordination areas

I. Strengthen the national food fortification steering and technical committees to ensure government leadership and stakeholders including private sector engagement
II. Strengthen the national food fortification alliance including restructuring based on international experience
III. Establish a national food fortification development partners forum to harmonize support.

Strengthening LSFF in Ethiopia - Unicef Ethiopia (2/2)

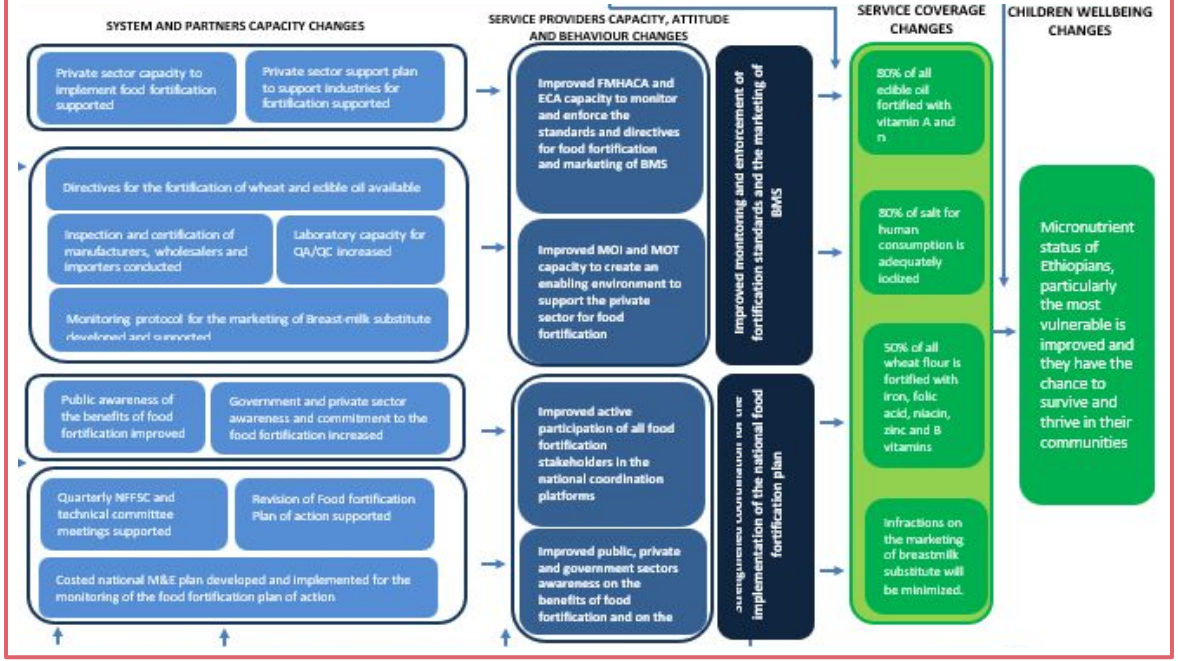
Contribution to LSFF outcomes

I. National coordination including the development of the national plan
II. Industries mapping which includes geographic location, production capacity, human resources, equipment, and readiness for fortification.
III. Advocacy for endorsement of the compulsory standard and regulatory capacity development

Results achieved

I. Regular convening of the national coordination meetings and development of national plan
II. Compulsory standard approved for fortification of wheat flour and edible oil through joint advocacy and support
III. Mapping of the industries conducted with the leadership of the Ministry of Industry
IV. Significant contribution to evidence generation; the national nutrition survey including micronutrient status to enhance advocacy for implementation of LSFF
V. Regulatory capacity development – in progress

Theory of change



Collaboration in our LSFF work "Circle of friends"

Partners

- Government stakeholders: Ministry of Industry, The Food Beverage Industries Research Development Center, Ministry of Health, Food and Drug Authority, EPHI,..)
- Development partners: (GAIN, NI, TNS, FFI)
- The private sector

Users

- Government stakeholders
- Private sector
- Population, specifically children and women

World Health Organization (WHO) (1/2)

Luz De-Regil
deregillu@who.int

Overview of our LSFF work

Focus Geographies

Global through 5 regional offices: AMRO, AFRO, EURO, SEARO and WPRO

WHO has addressed food fortification since 1951. "Prevention and treatment of severe malnutrition of civilian populations during war"

LSFF scope of work

- Produce guidelines on effective and safe food fortification and indicators to assess nutritional status;
- Develop implementation (including monitoring) guidance and tools,
- Monitors global micronutrient status of populations, policies and coverage.
- Support Member States in establishing policies, guidelines and regulations on fortification.
- Convene public health experts and alliances.

WHO is developing guidelines on oil fortification, updating implementation guidance on food fortification (with FAO) and salt iodization (with UNICEF). WHO is developing a global LSFF report.

Top 3 objectives

Support the request of Member States to WHO in the recent resolution to accelerate efforts in fortification on the following:

I. To continue providing normative evidence-based guidance and standards to Member States on food fortification and their implementation by Member states;
II. To provide guidance on risk–benefit assessment, quality assurance, monitoring of compliance, and periodic evaluation of coverage and impact of the food fortification programmes;
III. To develop a report on the global status of food fortification and supplementation, and use it to identify global and national priorities.

Challenges and gaps

I. There is growing implementation evidence and experience. The challenge is bringing together all that knowledge while keeping the information digestible and doable for programme designers/managers. Good progress towards the end of 2023.
II. Food fortification is often not highlighted in country strategies and requests for support are sporadic. WHO national staff needs technical and financial support to assist countries with the implementation and monitoring of programmes.
III. No clear indicators for global monitoring. Activity i) is unlocking this challenge.

Coordination areas

- Alignment between development partners; implementing agencies, donors for advocacy, programme design and implementation, and data collection at the national level.
- Policy coherence between fortification and NCDs agenda at the global and national levels.
- At regional level, alignment on policies and trade.
- Innovation opportunities.

Implementation guidance for fortification (update orange book) (2/2)

Luz De-Regil
deregillu@who.int

Contribution to LSFF outcomes

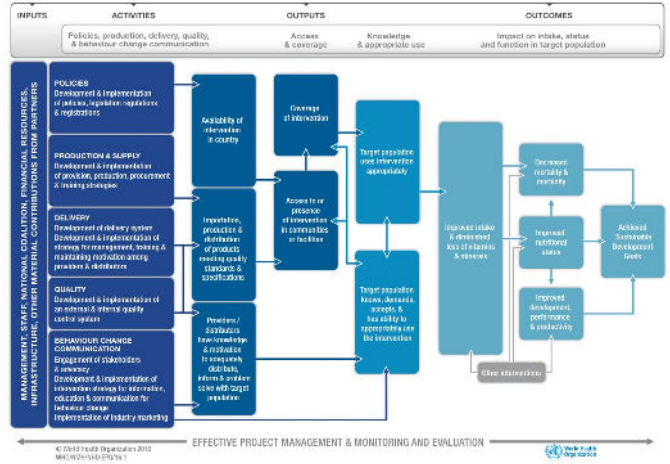
I. High-quality implementation of existing evidence-based fortification guidelines for different food vehicles
II. Address knowledge gaps and support adaptation in country context through technical assistance to Member States
III. Improved effectiveness and sustainability of programmes through an interdisciplinary and inclusive approach

Results achieved

I. Nine chapters in final stage of drafting. They build on the original content of the publication: Guidelines on food fortification with micronutrients, published by WHO and FAO in 2006.
II. Gender mainstreaming throughout the guidance.
III. Technical editor on board.
IV. Third technical meeting to be held in Geneva in September to finalise content and discuss dissemination plans.

Expected publication date: Q1 2025

Theory of change OF THIS PROJECT



Collaboration in our LSFF work
"Circle of friends"

Partners

More than 25 experts from academia, UN agencies and NGOs working in LSFF. A diverse group of reviewers including potential end-users to provide input on usability of guidance at country level.

Users

Member States, international and national NGOs, academia. The main purpose is to assist countries in improving quality of implementation and impact of food fortification programmes.

https://www.who.int/health-topics/food-fortification#tab=tab_1

Data & R&D Interfaces

Effectively integrate innovative LSFF products (vehicles and MN innovation) with impact potential into delivery channels.

Index

DInA – Micronutrient Data Innovation Alliance
Micronutrient Forum (1/2)

Saskia Osendarp, Saskia.Osendarp@MicronutrientForum.org
Reed Atkin, Reed.Atkin@MicronutrientForum.org

Overview of our LSFF work

Focus geographies
DInA works globally

An alliance of members across more than 40 countries focused on improving the availability and use of micronutrient-related data.

LSFF scope of work

The Micronutrient Data Innovation Alliance (DInA), hosted by the Forum, is an alliance of diverse members to improve the availability, quality, accessibility, and use of micronutrient-related data across the value chain to support national-level decision-makers to better design, implement, measure, and optimize programs and policies, including LSFF.

Top 3 objectives

I. Support national level actors to collect and use micronutrient data.
II. Provide data leadership including technical assistance and spearheading work outside other's mandates.
III. Facilitate global level coordination and knowledge management and guidance to promote the collection and use of micronutrient data.

Challenges and gaps

I. Ensuring increased collaboration on regional and national action.

II. Lack of a strategic approach to data needs (collection, dissemination, insights, etc.) at the regional and national levels.

III. More participation is needed from across the LSFF value chain on data advocacy by promoting the collection and use of data in all aspects of LSFF.

IV. The LSFF must integrate better with the food systems narratives to ensure relevance.

Coordination areas

I. Intentional transparency and coordination on regional and national action.
II. More advocacy from actors throughout the LSFF value chain for the collection and dissemination of data.
III. Improved national capacity development to ensure data is collected and used in a repeatable and efficient manner.

DInA – Micronutrient Data Innovation Alliance (2/2)

Saskia Osendarp, Saskia.Osendarp@MicronutrientForum.org
Reed Atkin, Reed.Atkin@MicronutrientForum.org

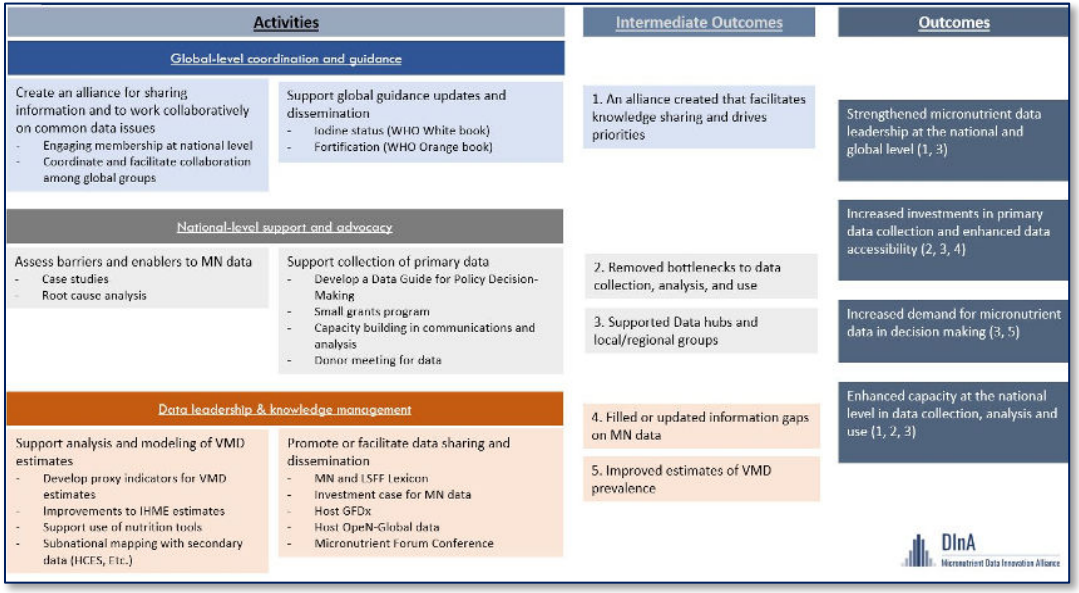
Contribution to LSFF outcomes

I. Informing LSFF actors on using data and insights through GFDx.
II. Advocacy to ensure more investments in data generation and data use by country decision makers and LSFF actors.

Results achieved

I. Developed and launched a consensus lexicon including LSFF programmatic and regulatory terms, among others, which will be adopted by the WHO in their forthcoming orange book update.
II. Launched an initiative to engage partners with modeling expertise to develop global, national, and subnational micronutrient status (deficiency) estimates in data scarce settings.
III. Intentionally created regular touchpoints for collaboration by hosting regular Global Micronutrient Data Group meetings, attracting >30 organizations.
IV. LSFF actors from 193 countries visited GFDx to date and 165 publications have cited GFDx, including high impact publications(GNR, WHA resolution, WHO guidelines, Food Systems Dashboard).
V. Engaged with IHME by providing technical expertise to strengthen their methodology on micronutrient deficiency estimates and burden.

Theory of change



Collaboration in our LSFF work "Circle of friends"

Users

DInA Alliance Members
WHO
Data generators
Data consumers
Decision makers & advisors
Program developers and managers
Regional actors and national advisors use GFDx data to inform and influence LSFF policies

DInA Homepage
LSFF Lexicon
Global MN Data Landscape
DInA Membership

Partners

CDC
DataDent
Fraym
GFDx (FFI, GAIN, IGN, & public and private sector partners)
IHME
LeNNS
MAPS
MIMI
NI
OpeN-Global
UC Davis & UC Berkeley
UNICEF
WHO

Food and Agriculture Organization of the United Nations (FAO) (1/2)

LM Neufeld; BA Holmes
ESN-Director@fao.org

Overview of our LSFF work

Focus geographies
Global

Specialized agency of the UN aiming to defeat hunger and improve nutrition and food security
*Active in LSFF since **...Many Years***

LSFF scope of work

FAO, as a normative body of the United Nations, has been closely engaged in the development of evidence-based guidance for program implementation, including fortification.

Our interest is to keep that guidance up to date, drawing on the latest evidence and to enhance the use of fortification data to ensure estimates of nutrient availability and consumption from a variety of sources is up-to-date and as accurate as possible.

Key objectives

I. Enable better estimates of food fortification's contribution to nutrient availability and consumption using a variety of publicly available dietary data sources.

II. Enhance quality of LSFF programs through better global guidance (in collaboration with WHO).

Challenges and gaps

I. Lack of evidence of effective approaches to food fortification implementation.

II. Data included in food composition tables related to fortified foods limiting their application and use.

III. Data on implementation of food fortification, coverage and compliance that constrains accurate estimates of nutrient contribution.

Coordination areas

I. Providers / generators of various types of data, where food fortification is not, or is inconsistently taken into consideration.
II. Experts generating evidence related to effective approaches in food fortification.
III. Data analysts and compilers working in food composition.
IV. Users of data, evidence, and guidance on food fortification.

Food and Agriculture Organization of the United Nations

The FAO Data for Healthy Diets Initiative (2/2)

LM Neufeld/ BA Holmes
ESN-director@fao.org

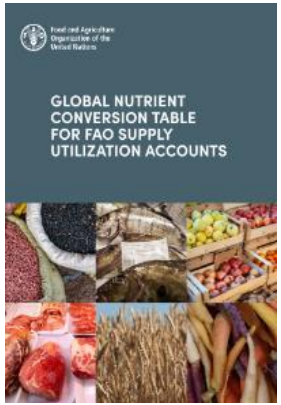
Contribution to LSFF outcomes

Better data is used to design and assess progress of LSFF.

Evidence-based guidance is used to inform LSFF design and delivery.

Results achieved

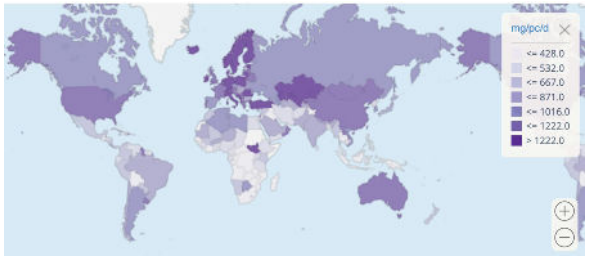
I. Updated fortification guidance book ("orange book" update), 2024 (forthcoming.)
II. Publication to inform methods used to estimate the contribution of fortified foods to micronutrient intakes; with an overview of data inputs using fortification data (from availability, household level, individual level) (forthcoming).
III. Global micronutrient data calculated for the FAO supply data for 186 countries.



Theory of action

Global availability data for a range of nutrients has been recently launched on FAOSTAT. A methodological approach with case studies will be prepared to explore embedding fortification data into FAO platforms to expand its usability and relevance.

Global calcium availability, by country, 2021



Source: Food and Diet domain on FAOSTAT

Collaboration in our LSFF work "Circle of friends"

Partners

- Other UN organisations (WHO / UNICEF / IFAD / WFP …)
- Micronutrient Forum
- INFOODS food composition network
- National Statistical Offices
- Ministries of Health, Agriculture and Education

Users

Evidence-based guidance:
- Implementing partners
- Policy advisors

Nutrient data:
- Researchers
- Evaluators

Links: Food and Diet domain on FAOSTAT: https://www.fao.org/faostat/en/#data and Food and Diet analytical brief: https://doi.org/10.4060/cc9454en

Giract (1/2)

Velamur Krishnakumar – Krishna@giract.com
Shankar Kaushik – kaushik@giract.com
Graham Robinson – grobinson@giract.com

GIRACT
Geneva, Switzerland

Overview of our LSFF work

Focus geographies
ET, NG, IN, BD, PK, ID, TZ, KE

Transnational market research and consulting organisation active in understanding markets for micronutrients, premixes for LSFF and processed food since 1999

LSFF scope of work

We tracked the production/availability of carriers, primary nutrients and premixes across geographies, and analyzed the status of technical, commercial and legal issues in fortification in developing countries in order to recommend new strategies and options to improve the efficiency and effectiveness of fortification programmes

Top 3 objectives

I. Track the global value chain and volume movement of primary nutrients of focus (vitamin A, Folic acid, Iron).

II. Understand micronutrient production value chain and competitive scenarios in focus and secondary countries.

III. Draw systems maps by country/ nutrient to understand factors influencing localization of micronutrient premix manufacture by geography.

Challenges and gaps

I. Localization is influenced by a complex interplay of factors contributed to and affecting the players involved – beneficiary public, government, industry and NGOs.

II. Generating interest and subsequent demand for micronutrient premix at minimum viable volume for an industry to be established is the key challenge.

III. Systems map is a template for understanding the localization potential for micronutrient/premix manufacturing environment with more data required for a simulation model.

Coordination areas

I. Industry approach for nearshoring/friendshoring manufacture to justify a local facility.

II. Political willpower driven by cultural nationalism.

III. A central coordinator to pull together all stakeholder actions in a coherent fashion.

LSFF value chain full market assessment - GIRACT (2/2)

Velamur Krishnakumar – Krishna@giract.com
Shankar Kaushik – kaushik@giract.com
Graham Robinson – grobinson@giract.com

Contribution to LSFF outcomes

I. Understand value chain and volume movement of micronutrients and premixes across geographies and ultimate disappearance along with stakeholder share.
II. Draw out a systems map to visualize the interplay of factors that influence localization of micronutrient premix manufacture building upon the market data.

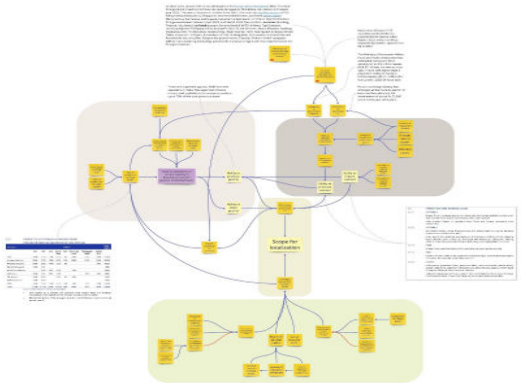
Results achieved

I. Mapped out global and country level market dynamics for micronutrient premix availability including manufacture and trade.

II. Identified data points needed for a simulation model of the complex LSFF environment in different geographies.

Theory of change/ Theory of action

I. Global manufacture of micronutrients is restrictive for synthetic vitamins but more democratic for fermentation based vitamins and mineral nutrients.
II. Premix manufacturers perspective across geographies identifies volume/market potential, legislation, technology and availability of primary nutrient in that order of priority as challenges.



Collaboration in our LSFF work "Circle of friends"

Partners

Our team of analysts conducts discussions with key manufacturers of primary nutrients, micronutrient premix manufacturers, government agencies, fortified food manufacturers and NGOS in geographies of scope to understand the market scenario.

Users

Our outputs are targeted towards all stakeholders who wish to take appropriate action in fulfilling localization objectives.

Global Center *for* Gender Equality

Global Center for Gender Equality

Elizabeth Katz, Research Director
Elizabeth.Katz@gcfge.org

Overview of our LSFF work

Focus geographies
ET, IN, NG, BD, KE, ID, PK, TZ, ECOWAS

GCfGE provides technical assistance on gender integration to the Bill and Melinda Gates Foundation.
Active in LSFF since 2020

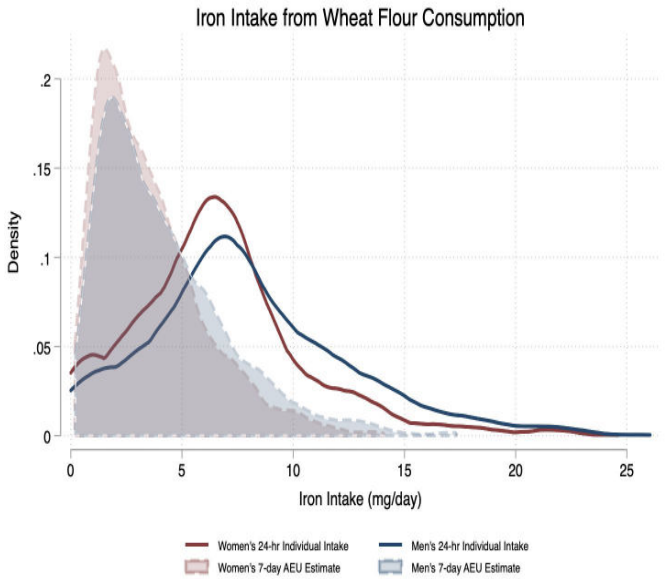
LSFF scope of work

Provide technical assistance to BMGF in the design and implementation of its Gender and LSFF Learning Agenda, including:

- Research using sex- and age-disaggregated food consumption data to inform vehicle and fortificant choices and appropriate levels of fortification
- Adoption of best practices for sex and gender considerations in clinical trials, with special attention to gender differences in (cooking and sensory) trait preferences
- Enable women's participation in the LSFF value chain, with a focus on micro, small and medium enterprises.

Key objectives

I. How can data on individual food consumption and sex differences in physiological requirements be utilized to inform optimal country-level selection of vehicles, prioritization of fortificants, and standard setting for the most nutritionally vulnerable sub-populations?
II. What are the demand-side gender barriers to the adoption (purchase and consumption) of fortified foods?
III. What are the (potentially heterogeneous) impacts of country-level LSFF programs on micronutrient intakes/status/deficiencies for women and men across the lifespan?
IV. What are the gender-related barriers to anemia reduction?



Challenges and gaps

Cost of high quality individual-level food consumption data collection

Limited reach of fortified staple crops to rural households who consume out of own production

Coordination areas

Coordination between nutrition, public health, and social science researchers with regulatory and implementation organizations

Hystra
Bouillon Cube Fortification support for West Africa

Lucie Klarsfeld: Lklarsfeld@Hystra.com
Adrien Darodes: Adarodes@Hystra.com

Contribution to LSFF outcomes

- Provided inputs related to fortification scenarios at different cost levels to optimize formulation, used by Country Working Groups in charge of bouillon fortification standards to inform their decision (ongoing).
- Analysed and shared lessons learnt from marketing multi-brand or brand agnostic fortification efforts (ongoing).
- Codified best practice in engaging the private sector in LSFF (ongoing).

Results achieved

- Led the **preparation and facilitation of a Bouillon convening** in September 2022 ending with a commitment to further fortify bouillon from several manufacturers.
- Prepared a **"Senegal Tax Study"** with HKI, to analyse the impact of the June 2021 15% tax on bouillon cubes in Senegal as a proxy to assess the product's price elasticity.
- Conducted a **"Design to Cost"** exercise with UC Davis and DSM to identify the most cost-effective fortification premix for West Africa: Gathering and analysing premix costs depending on fortification scenario and volumes of order, to inform bouillon fortification standards in West Africa.
- Analysed and shared **lessons learnt from marketing multi-brand/brand agnostic fortification efforts.**

Theory of change

The **Bouillon project seeks to**

- Identify private sector barriers to fortification in West Africa and potential areas where BMGF can support.
- Understand and summarize key findings on fortification costs in various scenarios: basis volumes, choice of vitamins, geography etc.
- Inform the design of a communication strategy for industry and consumer uptake.
- Support program management.

The **above activities will lead to**

- Recommendations on how the industry and BMGF can tailor support to producers.
- Detailed summary on key findings on fortification cost scenarios to inform fine tuning of standards setting/policy.
- A high-level communication strategy brief.

This will result in:

- Improved alignment and transparency between key stakeholders of consortium, including bouillon producers.
- Informed decision of Country Working Groups on future fortification standards.
- Optimized private sector engagement.

This will maximize the chances that more producers fortify their products and address micronutrient deficiencies in West Africa.

Collaboration in our LSFF work "Circle of friends"

Partners

BMGF, HKI, UC/ DAVIS, CSIRO, premix manufacturers, GAIN premix facility, bouillon manufacturers, Bouillon Country Working Groups.

Users

Cost analysis: All consortium members (see partners above, except GAIN premix facility).
Understanding private sector barriers and potential support areas – BMGF
Communication strategy brief: All consortium members.

Iodine Global Network (1/2)

Werner Schultink jwschultink@ign.org

Overview of our LSFF work

Focus geographies
Global

We work to ensure a sustainable elimination of iodine deficiency. Active in LSFF since 1985.

LSFF scope of work

IGN serves as the global advocate for iodine nutrition. Our approach involves supporting and strengthening national iodine nutrition programs through comprehensive review, guidance, technical support, and communication efforts. We forge partnerships to garner attention to the iodine deficiency issue, leveraging resources for sustainable and equitable program implementation. IGN seeks innovative strategies, using data effectively to enhance programs and safeguard progress. We contribute to a deeper understanding of iodine deficiency with knowledge products making programs more effective and impactful.

IGN supports national programs and initiatives, emphasizing long-term sustainability by integrating iodine nutrition efforts into broader food fortification frameworks and national nutrition policies. Our collaboration with regional and national programs aims to build their capacity, fostering increased national ownership, funding, and partnerships to ensure sustained optimal iodine intake.

Top 3 objectives

I. **Generate and disseminate knowledge:** at global, regional and national levels through articles, webinars, databases, assessments, among others, in order to inform and engage various stakeholders in improving the iodine program.
II. **Conduct research and introduce innovative approaches** to develop a more sustainable iodine program.
III. **Provide technical support to countries, create tools and develop guidance** to examine and address the vulnerability of the iodine program that has an impact on the iodine status of the population.

Challenges and gaps

I. **Program sustainability** is the key to a successful iodine program. Unfortunately, iodine programs are often not well maintained over time, sometimes due to a decrease in commitment following initial achievements.
II. **Lack of data** may mask a potential re-emergence of iodine deficiency at national level, or lack of disaggregated data may mask disparities between regions, sub-groups or wealth quintiles that should be taken into account.
III. **Inequities:** Adequate program performance at national level may mask disparities at sub-national level, where certain groups may not be adequately reached by the iodine program.

Coordination areas

I. Functioning multi-sectoral coordination involving decision-makers, the private sector and other relevant stakeholders engaged in the iodine program.
II. National governance commitment and private sector ownership.
III. Well-established routine monitoring that provides information on program performance to multi sectoral coordination, which can adapt the corrective measures needed to improve the program.

Towards more equitable and sustainable iodine programs
Iodine Global Network (2/2)

Werner Schultink jwschultink@ign.org

Contribution to LSFF outcomes

IGN's primary focus is on salt iodization. The organization contributes to LSFF outcomes through institutional knowledge and a deep understanding of the situation. IGN engages in advocacy efforts, disseminating information through blogs, the IDD newsletter, and policy briefs. As well as knowledge products and data collection tools. Our initiatives aim to re-energize commitment to iodine programs, foster improved legislation, and strengthen coordination frameworks. Additionally, IGN works towards orienting and reinforcing national nutrition or iodine policies, closely with larger food fortification policies , contributing significantly to advancing the field.

Results achieved

In Sri Lanka, a sentinel study identified a main bottleneck causing decreased iodine status for 22 million people, which is now being addressed. In Europe, cost- effective data collection methods hold potential to initiate iodine nutrition surveillance for millions. IGN's efforts raised awareness and provided access to iodized salt for 2 million individuals in Peru and Argentina. In Moldova's 2.6 million population was safeguarded from iodine deficiency amid the Ukraine war. IGN's actions in Afghanistan assisted in protecting 40 million people.

Latest reports : https://ign.org/knowledge/

Iodine Scorecard : https://ign.org/scorecard/

Theory of change

Activities	Outputs	Intermediate outcomes	Final outcomes	Impact
Review alternative options to collect iodine program status data e.g. surveys, surveillance	Improved ability to collect iodine program status data	More comprehensive and updated program status data	Increased data collection by countries	Program managers have updated, regular review of program status and how to address problems
Expand equity analysis using existing data sets	Improved knowledge of inequities in iodine programs	Knowledge on equity analysis improved	Program data provides more frequently information on inequities	Countries are guided by the new understanding
Develop fortification surveillance tool	Fortification surveillance tool available	Improved monitoring of program performance	Improved ability to collect iodine program status data	
Develop program performance assessment tool	Program performance assessment tool available	Program performance assessment tool in use	Better program design and implementation	There is improved iodine intake from processed foods where needed and possible
Review and analyze the use of iodized salt in processed foods In-depth review of implementation; assess processed food landscape	Better understanding on processed food landscape	Improved understanding of role of iodized salt in processed food can address inequities; improved guidance on assessing iodized salt in PF	Improved program assessment, including of processed food	Governments, industry and stakeholders are informed about the potential impact, required investments and limitations of double or multiple fortified salt
Review developments in salt iodization beyond iodine	Up to date knowledge on DFS and MFS	Knowledge is used to inform innovative solutions in salt iodization	Pathways identified to further develop/use DFS or MFS	

Collaboration in our LSFF work Our "Circle of friends"

Partners

IGN works with international partners such as UNICEF, WHO, Nutrition International (NI), the Global Alliance for Improved Nutrition (GAIN) and the Micronutrient Forum (MNF), and support from a network of regional and national coordinators.

Users

Our outputs are used by program managers to assess their program or implement appropriate measures, and by various stakeholders to advocate in favor of the iodine program, by decision-makers to orient national strategy.

National Institute of Food Technology Entrepreneurship and Management

Dr. Oberoi, Dr. Komal Chauhan, Dr. Harinder Singh
www.ceffniftem.com

Overview of our LSFF work

Focus geographies
India

Vision: To be an International Center of Excellence that integrates all facets of food technology, entrepreneurship, and management and be recognized as the focal point for catalyzing the growth of the food processing industry in India in the global context.

LSFF scope of work

CEFF: Food Fortification guidance and trainings

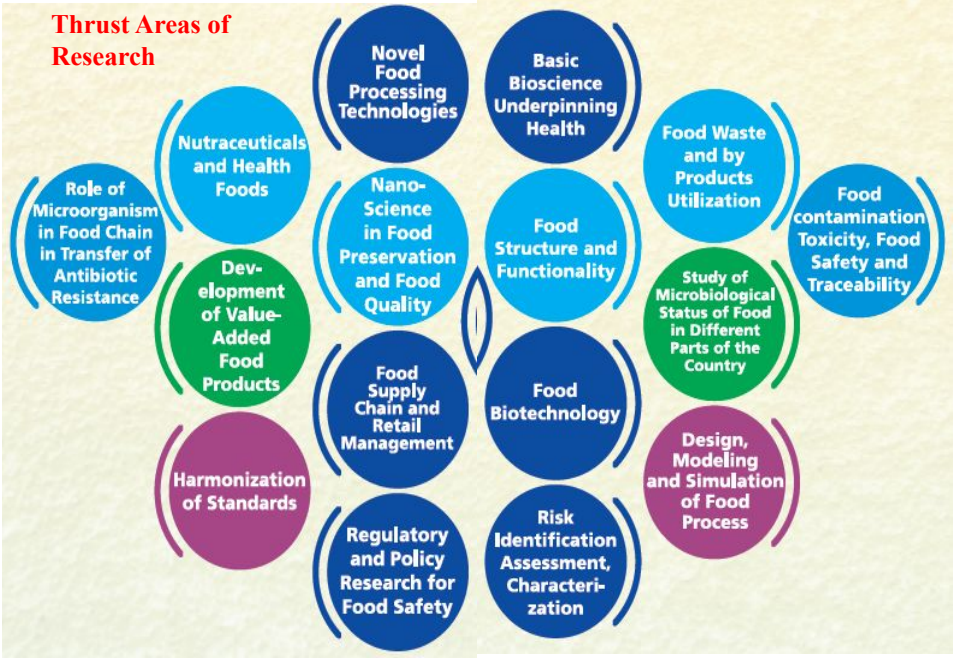
I. Staple Foods
II. Micronutrients' analysis
III. Capacity Building
IV. Certification Body for FRK FR and Premix

Coordination areas

I. Select, nurture and incubate Start-ups
II. Innovation and Entrepreneurship Networking
III. Access to resources/ facilities of the Institute
IV. Provision of seed capital
V. Nurturing the research culture
VI. Research on different facets of food processing and allied areas
VII. NIFTEM Contract Research Organization (CRO) - Industry sponsored projects
VIII. Knowledge dissemination, Skill development, Capacity Building and other outreach activities
IX. Networking and Connect with diverse stakeholders

Top Objectives

I. Function as a Knowledge Repository
II. Provide intellectual backing for regulations
III. Promote cooperation and networking
IV. Develop techno-managers



Particles for Humanity (PFH) (1/2)

Sam Brady, sbrady@particlesfh.com
Judith (Jet) Ternes, jternes@particlesfh.com

Overview of our LSFF work

Focus geographies
Africa, South Asia

Transforming early-stage medical technology into products for people in LMICs.

LSFF scope of work

Since 2020, PFH has been developing a more stable formulation of vitamin A, PFH-VAP, optimized for use in large-scale food fortification. Maintaining vitamin A content is a challenge in dry food fortification (like flour, sugar, and bouillon), in addition to applications beyond LSFF, because vitamin A is unstable in hot and humid conditions.

PFH-VAP has demonstrated 4x the stability of a leading commercial vitamin A in bouillon in harsh conditions. Initial data are being generated on PFH-VAP in wheat flour and in sugar. Our goal is to ensure an adequate quantity of life-saving micronutrient is delivered to consumers.

Top 3 objectives

I. Address inadequate vitamin A intake and vitamin A deficiency, which affects 19 million pregnant women and 190 million preschool age children globally.

II. Develop a more stable formulation of dry vitamin A to be used across LSFF.

III. Support enabling environments to incentivize adoption of stable vitamin A formulations in food vehicles with high impact potential.

Challenges and gaps

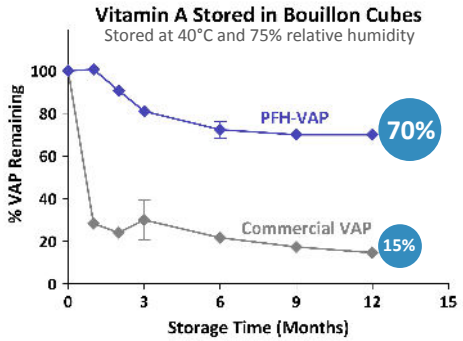
I. Vitamin A's potential impacts through LSFF is reduced when standards exclude vitamin A due to instability.

II. Fortification standards do not differentiate formulations of dry vitamin A based on stability.

III. Finding benefits for food processors in the LSFF ecosystem to incentivize compliance.

IV. Lack of resources for testing and enforcement, leading to noncompliance with standards.

V. Food price inflation creating high cost sensitivity.



PFH-VAP has **>4x better stability**

Coordination areas

I. Generating current data on vitamin A deficiency in low-income countries.

II. Tighter link between policymakers and current data to focus resources on the most effective micronutrient interventions.

III. Industry, NGOs, and regulators generating and sharing data on vitamin A stability in real-world conditions.

Particles for Humanity (PFH) (2/2)

Sam Brady, sbrady@particlesfh.com
Judith (Jet) Ternes, jternes@particlesfh.com

Contribution to LSFF outcomes

Food producers have access to a more stable formulation of vitamin A.

Innovation in micronutrient encapsulation for use in LSFF.

Results achieved

Image credit: Lesaffre.com

- PFH-VAP significantly outperforms commercial vitamin A in bouillon.
- 90K child lives could be saved in Nigeria through 2030 with PFH-VAP.[1]
- Cost per-child life saved is 90% cheaper compared to vitamin A supplementation.[2]
- Commercial scale up in 2Q24.

Theory of Action

- With a cost-effective formulation of vitamin A, producers can deliver higher amounts of life-saving micronutrients to consumers with no or limited additional cost.
- This improves their ability to comply with standards, especially after storage in real-world conditions.
- Higher amounts of vitamin A delivered reduces prevalence of inadequate intake and vitamin A deficiency.
- A widely available, cost-effective vitamin A increases opportunities for vitamin A to be included in LSFF standards.

Collaboration in our LSFF work "Circle of friends"

Partners

Technical collaborators around the world on R&D efforts, input from industry, government, NGOs, donors, etc. for input on development plans.

Technology Inventor: Massachusetts institute of Technology (MIT).
Key Partners: LIS by Lesaffre, Bonals, Eurofins, University of California-Davis (UC-Davis).

Users

PFH-VAP will be sold B2B through ingredient manufacturers and/or premixers to food processors who fortify with vitamin A.

For more information, please see our website and follow along with exciting updates.

Notes: (1) Preliminary results of UC-Davis-MINIMOD analyses based on Nigeria HCES data and LiST modeling, modeling period 2023-2030, assumes bouillon cube fortified at 30% RDA for adults consuming 2.5 g/p/d; (2) GiveWell 2023

Advocacy and communication enabling effective LSFF

Key Enabler

Effective LSFF advocacy to amplify and coordinate LSFF objectives

Index

LSFF DELIVERY PARTNER CONVENING

STRENGTHENING DELIVERY TO MAXIMIZE IMPACT

Access to Nutrition Initiative (ATNI) (1/3)

Bo-Jane Woods
E-mail: Bo-jane.woods@accesstonutrition.org

Overview of our LSFF work

Focus geographies
Global, India, Kenya and Tanzania

Transforming markets for more nutritious foods.

LSFF scope of work

ATNI's benchmarks incorporate indicators on food fortification. Investors are increasingly seeking strong nutrition actions and fortification is one of these. ATNI is strengthening its indicators to assess food manufacturer's policies, practices and procedures in relation to micronutrients; completing food profiling including of fortified foods in East Africa; and designing an index on premix suppliers.

Our interest & contribution to food fortification

ATNI has 11 years' experience in assessing and driving forward accountability and positive actions of the packaged food industry.

Projects presented

1. East Africa food market assessment.
2. Premix supplier assessment.

Top 3 objectives

I. Regular monitoring of large food manufacturers and premix suppliers on their practices, policies and procedures to drive improved quality of fortified foods.
II. Monitor and discourage fortification of unhealthy food and beverage products such as those high in fat, salt and sugar.
III. Gain insight on how fortification can be a financially "material" issue for investors and further the business case.

Challenges and gaps

I. Wavering transparency and engagement by industry on how they procure fortified ingredients and how they fortify packaged foods (policies, procedures, practices).
II. A lack of available data on which packaged foods are being fortified at the global and national scale, their nutritional content and product healthiness.
III. Limited data on quality of premix used in food fortification value chains in countries of focus.

Coordination areas

I. Improved coordination of QA/QC between government and premix value chain players (who is responsible).
II. Regulation on fortified staples and condiments including packaged food with substantial amounts of fortified ingredients.
III. Alignment on metrics and reporting.
IV. Improved data availability.

East Africa food market assessment project - ATNI (2/3)

Bo-jane Woods
Email: Bo-jane.woods@accesstonutrition.org

Contribution to LSFF outcomes

Private Sector Initiative
Food manufacturers are incentivized to integrate fortification and deliver nutritious, healthy high quality packaged fortified foods and staples.

Results achieved

Project is still in design phase. However, ATNI to date has:

I. (Globally) Encouraged large food manufacturers to integrate fortification into their nutrition policies.

II. Supported development of India's food fortification policies and regulations.

Theory of change

Main activities:

I. Kenya and Tanzania included in Product Profile assessment of Global Index 2024.
II. Desk research to map the food retail environment in both countries with a focus on food fortification value chains.
III. Stakeholder consultations, in-country visits.
IV. Mapping of companies and institutional investors (and securities and exchange commissions).
V. Tool development to assess product healthiness including micronutrients and track use of fortified ingredients.
VI. Result dissemination and stakeholder engagement.

Outcomes:

Available information on the food retail sector, concretely:

I. the state of packaged foods being sold in the two countries;
II. the extent to which they address micronutrient deficiencies;
III. what influence food and beverage manufacturers and retailers have and could have on food fortification supply chains;
IV. The current investor landscape for the food sector.

This information will be publicly available to food system actors to inform the national nutrition agenda, national or regional regulations, fiscal policies, among others.

Collaboration in our LSFF work "Circle of friends"

Partners

Local government and regulatory bodies e.g., MoH, bureau of standards.
Public health research institutes and networks (FERN, TFNC, APHRC); NGOs such as IFPRI, GAIN, NI.
Local universities such as JKUAT. These will be consulted and either play a role as collaborators and/ or serve as advisors on this project.

Users

Information will be made available to the government, private sector and investors in Kenya and Tanzania on e.,g:

- The food retail environment.
- Food fortification value chains.
- Healthiness of packaged food products.
- Investor landscape.

Premix supplier assessment project - ATNI (3/3)

Greg Garrett
Email: Greg.garrett@accesstonutrition.org

Contribution to LSFF outcomes

Private Sector Initiative
Food producers incentivized to integrate fortification and deliver quality fortified foods.

Public Sector Initiative
Public sector establishes and enforces quality regulations and standards.

Theory of action

Main activities

I. ATNI will adapt its Index methodology applying this to vitamin and mineral suppliers including those which are publicly listed (e.g. DSM, BASF), other major suppliers (e.g., Muhlenchemie) as well as the top Indian manufacturers and suppliers.
II. Identify the main levers of change (incentives) for the premix industry.
III. Pilot the index and disseminate.

Outcomes:

I. Improved compliance and quality of premix, fortified foods and ingredients.
II. Greater recognition and incentivization for premix providers to sustain efficacious and quality levels of premixes.
III. Increased demand of quality premixes from millers, F&B manufacturers, government procurement agencies.

Premix companies benefit from recognition of their efforts to ensure product quality at production level and optimal usage down fortification chain. Industry and regulatory bodies have more in depth understanding of premix quality.

Collaboration in our LSFF work "Circle of friends"

Partners

GPF; IGN; FSSAI, local Indian research provider(s), investors, will be consulted on this work and either play a role as a collaborator and/ or serve as advisors of this project.

Users

Information will be available to premix providers, government, regulatory bodies, millers, food processors, research centers, and other premix purchasers on e.g.,

- Premix suppliers quality control and assurance policies, practices and procedures.
- Premix quality.
- Front runners efforts to ensure product quality at production level and optimal usage down fortification chain.

Food and Agriculture Centre of Excellence (FACE) Confederation of Indian Industry (CII) (1/2)

Kavery Ganguly/Neha Agarwal/Bhanvi Grover
kavery.ganguly@cii.in

Overview of our LSFF work

Focus geographies
India across various states (IN)

CII-FACE has been active in LSFF work since 2014.

LSFF scope of work

CII-FACE is involved in the advocacy of LSFF though voluntary Industry led initiatives and is part of key regulatory developments in promoting fortified foods in India. Through its project on National Edible Oil Fortification, supported by GAIN, we worked towards the creation of a national coalition on edible oil fortification, creating a brand of fortified edible oil, and establishing public private partnerships. CII FACE worked on nutritional behavioral change as a partnering agency in a community-based project on Double Fortified Salt (DFS) supported by ITC.

CII-FACE supports multi-stakeholder efforts to scale up LSFF through advocacy on policy and regulatory issues, awareness creation among consumers and manufacturers, and capacity building of manufacturers through technical assistance. CII FACE continues to work with communities on behavior change & improving nutrition outcomes.

Top 3 objectives

I. **Advocacy:** Build consensus and create an enabling environment for fortification in India and to further strengthen and extend the current portfolio of staple food fortification on voluntary basis.
II. **Consumer Awareness:** Create awareness among consumers about the benefits of fortified foods through multi- stakeholder platforms & media campaigns across the country.
III. **Technical Assistance:** Provide training and TA for adoption and sustainability of fortified food products.

Challenges and gaps

I. Building consensus on LSFF in a voluntary manner is time consuming and needs continued engagement with the industry players of all sizes.
II. Addressing consumer concerns about fortified foods versus diversified diets, clarifying myths, and improving the acceptability of fortified foods.
III. Establishing state level connects to enhance the uptake of fortified staples in social safety net programs to achieve large scale nutritional gains.

Coordination areas

I. Multistakeholder efforts to scale LSFF across companies & products through capacity building & technical assistance.
II. Creating greater awareness among consumers about the benefits of fortified foods in addressing micro nutritional deficiencies.
III. Research & knowledge sharing on LSFF technologies, nutritional science & emerging market trends.

National Edible Oil Fortification Project – CII FACE (2/2)

Meetu Kapur/Neha Agarwal/Surbhi Bhalla
Kavery Ganguly/ kavery.ganguly@cii.in

Contribution to LSFF outcomes

CII FACE through the National Edible Oil Fortification project supported by GAIN was able to successfully contribute towards industry capacity to undertake & scale edible oil fortification, develop QA/QC protocols for technical assistance, support an enabling regulatory environment to bring in standards for edible oil fortification, and create consumer awareness about fortified foods. Through the DFS project, CII FACE enabled behaviour change related to anemia prevention among women and girls.

Theory of change

Engage stakeholders in collaborative networks, advocate for aligned policies, regulatory standards, and enhance capacity through training. This fosters widespread awareness, policy adherence, and industry partnerships, driving increased adoption of LSFF. This approach will enable the LSFF initiative to aim for sustained improvements in public health and nutritional well-being.

Collaboration in our LSFF work "Circle of friends"

Partners

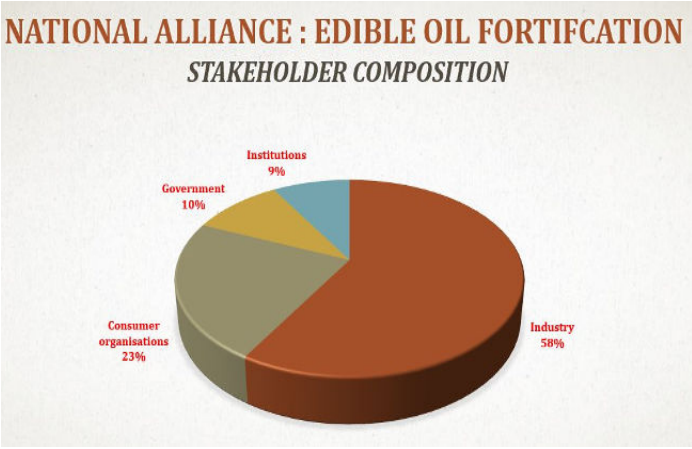
I. Industry players engaged in edible oil manufacturing and marketing
II. Consumer organization (VOICE)
III. Regulatory Authority
IV. State Governments
V. Ministry of Food Processing Industries

Users

I. Industry players interested in undertaking, scaling up fortified edible oil portfolio.
II. Regulatory Authority in bringing standards on edible oil fortification
III. Medical and academic fraternity
IV. Community

Results achieved

I. Created a National Coalition on Edible Oil Fortification with all major players having a single brand of fortified edible oil.
II. Through a public private partnership, contributed to the process of setting standards for fortified oils and creating an enabling environment for the industry to scale up their portfolio of fortified oils.
III. Conducted several zonal and state level consultations to enhance the uptake of edible oil fortification by the industry players, recognize the importance of introducing fortified oils in the social safety programs, & improve consumer perception about fortified oils/foods.
IV. Consumption of DFS improved serum iron levels better than the iodized salt ($p<0.05$). There was an increase in knowledge and practices about anemia.



HOPE-Spina Bifida and Hydrocephalus-SBH (1/2)

Beza Beshah Haile, Executive Director
bezabeshah@hope-sbh.org , +251949484848

Overview of our LSFF work

Focus geographies
Ethiopia

We are a neural tube defect affected community organization working on primary prevention.

LSFF scope of work

We are aware of the potential difficulties that may arise during the implementation of the LSFF program, based on our knowledge of past national LSFF initiatives. Therefore, we have identified the importance of involving community organizations in advocacy and catalyzing roles to support the LSFF processes.

Our contribution to food fortification

I. Raising public awareness through media sensitization.
II. Educating policy makers on needs for mandatory fortification laws and reinforcement.
III. Engaging women's rights groups to promote effective LSFF delivery.
IV. Establishing and co-chairing an NTD forum to advocate and facilitate collaboration between ministerial offices, HRP, and Prime Minister Offices.

Top 3 objectives

I. Advocating for and catalyzing the mandatory folic acid fortification of common food ingredients in Ethiopia.
II. Sensitize media professionals, policy makers, and women's rights groups for quality in LSFF delivery.
III. Engage micronutrient deficiency affected communities for data generation and consumer context relevant LSFF delivery.

Challenges and gaps

I. There is a discrepancy between the commitment of key government stakeholders to support fortification-related actions and that of the Ministry of Health. Due to mandate issues, the MoH is unable to influence other ministerial offices, highlighting the necessity for high-level coordination and advocacy. However, resource constraints have prevented us from conducting sensitization and advocacy activities.
II. HOPE-SBH's Cross-ministerial and Policymaker Advocacy Forum has been established, but technical and financial support is needed to maximize its influence and impact.

Coordination areas

I. Empowering the HOPE-SBH Advocacy Forum and linking it to global networks.

II. Promote Affected community organizations engagement in LSFF programing.

Spina Bifida and Hydrocephalus - HOPE-SBH (2/2)

Beza Beshah Haile, Executive Director
bezabeshah@hope-sbh.org , +251949484848

Contribution to LSFF outcomes

I. Gender sensitive LSFF delivery.
II. Advocacy and communications of LSFF.
III. Data generation.

Results achieved

I. Established NTD Advocacy Forum composed of professionals in multiple ministerial offices, parliament and non governmental stakeholders.
II. Sensitized 50 parliamentarians on NTD and LSFF.
III. Sensitized 50 media leaders on NTD and LSFF.
IV. Raised awareness of women rights groups on DFS-IoFA.
V. Initiated data generation on medical treatment outcomes and family burden of NTD in HOPE-SBH member families.

Theory of change

If HOPE-SBH advocates for and catalyzes the mandatory folic acid fortification of common food ingredients in Ethiopia, sensitizes media professionals, policy makers, and women's rights groups for quality LSFF delivery, and engages micronutrient deficiency-affected communities for evidence data generation and consumer context-relevant LSFF delivery, **then** access to folic acid fortified food in Ethiopia will increase.

Results:
Women have access to the knowledge and resources they need to protect their pregnancies from folate deficiency, leading to fewer cases of Neural Tube Defects and decreased financial, social, and emotional impacts on families. By advocating for mandatory fortification and increasing awareness and engagement in LSFF programming, HOPE-SBH hopes to promote sustainable change in Ethiopia's food industry and public health landscape.

Collaboration in our LSFF work "Circle of friends"

Partners

- Ministry of Health
- Ministry of Industry
- Nutrition International
- GAIN
- Child Help International
- BMGF
- Office of the Prime Minister
- House of Peoples Representatives
- Affected community

Users

LSFF partners, Rights advocates, High level decision makers and media.

Other LSFF Projects

I. Media Sensitization Project on FF and supplementation.
II. High level advocacy and sensitization events.
III. Sensitizing women right groups on FF and supplementation.
IV. Annual World Spina Bifida and Hydrocephalus awareness month advocacy, sensitization and awareness events.
V. Affected community consultation monthly sessions.

https://youtu.be/eTckpgQyuWU?si=0K3gPCE4tRMZaX3v

https://bit.ly/m/hope-sbh

National Heart Foundation of Bangladesh (1/2)

Sohel Reza Choudhury- sohel_r_choudhury@hotmail.com;
Rina Rani Paul- rrpaul25@gmail.com,

Overview of our LSFF work

Focus geographies
Bangladesh

Research and advocacy for prevention and management of NCDs in Bangladesh
Active in LSFF since 2021.

LSFF scope of work

Advocacy for drum oil phase- out, quality fortification of edible oil with vitamin A, edible oil fortification with vitamin D.

Importance of opaque packaging for fortified edible oil.

Media advocacy.

Our interest & contribution to food fortification

Improve the access to quality of the edible oil in Bangladesh.

Increase demand for safe and fortified edible oil.

Top 3 objectives

I. Based on the decision of the Ministry of Industry (MoInd) to phase out drum/bulk edible oil on December 31, 2022, advocacy with policymakers and regulatory bodies to ensure field-level monitoring at all levels in Bangladesh with the technical support of the MoInd and GAIN,

II. Advocacy to ensure proper quality of edible oil, and,

III. Media advocacy to create awareness among stakeholder and consumers.

Challenges and gaps

I. Due to increase in the price of edible oil in the global market, government is hesitant to intervene in the edible oil market fearing market instability.

II. The edible oil supply chain in Bangladesh is likely complex, with numerous actors involved at different stages. Some producers and distributors are reluctant to accommodate new practices. They negatively influence other businesses.

III. Low consumer awareness and voice on issues related to edible oil quality.

IV. Some of the activities are not adequately budgeted.

Priority coordination areas that we need to improve for a more effective LSFF ecosystem

I. Engage with local experts to generate local evidence on relevant issues to inform the advocacy effort.
II. Learn from experience from other LMICs especially from other South Asian countries.
III. Despite being extremely cooperative to NHF, regulatory finds widespread and consistent monitoring difficult due to limited personnel.

LARGE SCALE FOOD FORTIFICATION COUNTRY ADVOCACY BANGLADESH

National Heart Foundation of Bangladesh (2/2)

Rina Rani Paul- rrpaul25@gmail.com, PM, Large Scale Food Fortification Country Advocacy Bangladesh

Contribution to LSFF outcomes

Evidence based advocacy engaging public and private sector actors brings quality in policy environment and policy enforcement.

Results achieved

I. The ministry of industries (MoI), MoH, MoF, DNCRP, BSTI and BFSA expressed their commitment to support the LSFF advocacy activities at the national and subnational level.
II. Developed SBCC materials targeting stakeholders and users.
III. Sub-national level advocacy conducted to phase out drum oil.
IV. Developed resource documents on importance of opaque packaging for fortified edible oil and optimal packaging options to inform the advocacy efferit.

Theory of change

Activities	Interim result	Result
Advocacy with policymakers and regulatory bodies to ensure field-level monitoring to phase out drum oil.	Increased awareness of stakeholders and consumers	Creation of a market for high- quality fortified edible oil that will be accessible to consumers of all income levels.
Advocacy to ensure quality fortification of edible oil.	Increased motivation among stakeholders leading to effective monitoring	
Advocacy to improve packaging of edible oil to maintain quality of the fortified edible oil	Increased demand for quality fortified edible oil	
Media advocacy to create awareness among stakeholders and consumers.		

Collaboration in our LSFF work "Circle of friends"

Partners

Ministry of Industries, Food, Health, Local Government, Home Affairs.

Bangladesh Standards and Testing Institution, Directorate of National Consumers Rights Protection, Bangladesh Food Safety Authority, Consumers Association of Bangladesh.

Institute of Nutrition and Food Science, ICDDR,B, BRAC School of Public Health, Bangladesh Vegetable Oil Refiners & Vanaspati Manufacturers Association, Bangladesh Plastic Goods Manufacturers and Exporters Association of Bangladesh.

Retailers, dealers, oil packers, bulk oil users.

Users

Policymakers, academia, industries as well as consumers of edible oil in Bangladesh.

Leaflets developed by NHFB LSFF Leaflets with English Translation.pdf

Reimagine Europa (1/2)

Bernd Halling, ReImagine Europa
bernd.halling@re-imagine.eu

Overview of our LSFF work

Focus geographies
Europe

Reimagine Europa is a think tank that focuses on using narrative approaches to foster an inclusive and constructive environment for stakeholders to make evidence- informed decisions.

Active in LSFF since 2023.

LSFF scope of work

Establishing a joint understanding among stakeholders' perceptions especially the companies regarding the use of encapsulating agent for micronutrients for LSFF via Narrative methodology of Reimagine Europa (RIE).

Top 3 objectives

I. Create a detailed understanding of existing EU regulatory policies surrounding encapsulating agent for LSFF.
II. Develop narrative strategies to effectively address the concerns within existing narrative environments regarding the use of Basic Methacrylate Copolymer (BMC) for LSFF.
III. Foster stakeholders' alignment regarding the acceptance and adoption of BMC for LSFF.

Challenges and gaps

I. Limited data available to map narrative environment of LSFF.

II. Complex inter-relationship between companies and technology providers, with microplastics being just one aspect of this multifaceted issue.

Coordination areas

I. Enhance narrative strategies to effectively communicate LSFF adapted to stakeholder perspectives and concerns to ensure societal acceptance.
II. More advocacy to improve public awareness about LSFF and its benefits.

Strategic Approaches to Enhance Stakeholder Acceptance of Encapsulating Agents for Large-Scale Food Fortification Reimagine Europa (2/2)

Bernd Halling, Reimagine Europa
bernd.halling@re-imagine.eu

Contribution to LSFF outcomes

I. Clarification on encapsulating agent classification for LSFF under EU regulatory framework.
II. Effective communication strategy for LSFF stakeholders, focusing particularly on BMC.

Theory of action

Our research indicates improvement in acceptance of encapsulating agents for LSFF by stakeholders: By accurately informing industries about the EU legal framework concerning the use of encapsulating agents for LSFF, we will address concerns that hinder adoption. This, in turn is to increase companies' acceptance of encapsulating agents for LSFF.

Ultimately, we contribute to improved communication through narrative strategies to facilitate acceptance of encapsulating agents for LSFF.

Collaboration in our LSFF work "Circle of friends"

Partners

We are engaging with - DG Sante (Health), EFSA, DSM, BASF, PfH, Sight and Life, Nestle, Unilever, Evonik, IFF, Regulatory Lawyers, Nutrition Experts.

Users

The users of the output are the technology providers, the companies and the Foundation.

This outcome will help the companies and the technology provider in the EU to address underlying concerns, particularly on microplastics from the companies and subsequently facilitate the adoption of encapsulating agents for LSFF. Additionally, it will support the communication strategy for LSFF.

The Soybean Processors Association of India (1/2)

D.N. Pathak
ed@sopa.org

Overview of our LSFF work

Focus geographies:
India

We have been involved with fortification programs since 2010 to mitigate nutritional deficiency.

LSFF scope of work

Engage with soybean processors to fortify soybean oil.

We sincerely believe that nutritional deficiency is a big contributor to poor health, particularly among the lower strata of society. In a country like India, where avenues of micronutrient intake through other sources are limited, fortification is the only solution.

Top 3 objectives

I. 100% fortification of all soybean oil sold in India.
II. Create massive awareness among the public to demand fortified food products.
III. Help smaller players with latest and most economical technology for fortification.

Challenges and gaps

I. Abysmally low awareness about fortification and its benefits.
II. Lack of interest by the industry, which does not perceive the commercial benefits of fortification.
III. Reaching out to large number of edible oil players in a large geographical area.

Coordination areas

I. Engage with decision makers in the Government (Secretary level) and convince them to get involved.
II. Engage with nutritionists and food scientists for generating useful data for creating awareness.
III. Increase industry associations' participation.

The Soybean Processors Association of India (2/2)

D.N. Pathak
ed@sopa.org

Contribution to LSFF outcomes

Involved with FSSAI's regulatory framework for oil fortification and have imparted training on fortification to a large number of soy plants.

Results achieved

I. In partnership with GAIN, SOPA successfully onboarded a number of soy processors to fortify soy oil.

II. Brought out best practices in edible oil extraction and refining with help of several technology upgradation programs for soy industry with emphasis on quality and health aspects.

Theory of action

I. Indian Government runs the biggest free or subsidised meal programs across India. Inclusion of only fortified food in these programs will bring a massive change across the industry.

II. Labelling rules, though in place, public awareness is low. Strengthening the labelling regulatory framework will help in creating awareness.

III. Unless the industry sees a commercial benefit in fortification, progress will remain slow.

Collaboration in our LSFF work "Circle of friends"

Partners

We work closely with the regulator FSSAI, NGOs such as GAIN, TechnoServe, KHPT, technology providers such as DSM, Alfa Laval, Desmet, DVC Process and several consultants in the field of nutrition.

Users

We are a service provider and engage with the edible oil industry for fortification programs.

LSFF Portfolio Book