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METHODOLOGY TO IDENTIFY OPPORTUNITIES FOR ENGAGING THE FOOD INDUSTRY ON LARGE-SCALE FOOD FORTIFICATION

*GUIDANCE TO SUPPORT USAID'S LSFF PROGRAMMING GUIDE RESULTS
FRAMEWORK*

OCTOBER 2023

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ACRONYMS

AINFP	Alliance for Inclusive and Nutritious Food Processing
CEO	Chief Executive Officer
DFC	Development Finance Corporation
DFI	Development Finance Institution
DHA	Docosahexaenoic Acid
FACT	Fortification Assessment Coverage Toolkit
FFI	Food Fortification Initiative
FORTIMAS	The Fortification Monitoring and Surveillance Tool
GAIN	Global Alliance for Improved Nutrition
GFDx	Global Fortification Data Exchange
HH	Households
IR	Intermediate Result
LSFF	Large-Scale Food Fortification
MFI	Micronutrient Fortification Index
MT	Metric Ton
MSP	Feed the Future Market Systems and Partnerships Activity
NGO	Non-Governmental Organization
QA/QC	Quality Assurance/Quality Control
SAFE	Solutions for African Food Enterprises
SAPFF	Strengthening African Processors of Fortified Foods
SUN	Scaling Up Nutrition
USAID	United States Agency for International Development

INTRODUCTION AND OBJECTIVE OF THE METHODOLOGY

Introduction

In February 2022, USAID released its [Large-Scale Food Fortification \(LSFF\) Programming Guide](#). The Guide established that LSFF is an evidence-based and cost-effective system-level intervention that has the potential to improve diets and nutrition when it is appropriately designed and implemented and that USAID is well-positioned to drive efforts for LSFF through global leadership, context-specific expertise, and partnerships with governments, private sector, civil society, and academia. To kick-start LSFF initiatives by USAID Missions and other institutions, the Guide established an [LSFF Results Framework](#) outlining a comprehensive menu of potential LSFF activities to be considered by any institution interested in LSFF based on local context and identified constraints.

To support efforts worldwide to conduct LSFF programming in accordance with the Guide, USAID committed to design a set of rapid assessment methodologies in line with the Results Framework. These three assessment methodologies are for:

1. Dietary inadequacies and potential LSFF food vehicles
2. **Industrial food industry capacity to support LSFF**
3. The policy-enabling environment for LSFF

This document is focused specifically on the **second** of these three components, with a focus on evaluating opportunities to catalyze the role of the private sector in LSFF.

Figure 1: LSFF Feasibility Methodology Supports One of Three Objectives in USAID’s LSFF Programming Guide Results Framework



Objective

The primary objective of this document is to provide a methodology for stakeholders interested in LSFF to support them in conducting an assessment of the industrial food industry's capacity to deliver LSFF. The methodology is intended to generate the critical insights that are required to be able to identify context-relevant, feasible LSFF opportunities in line with the USAID LSFF Results Framework. In case food and condiment vehicles are not pre-selected, the methodology also guides which food vehicles to target based on key market dynamics such as consumption levels, compliance gaps, and share of processing by industrial-scale processors.

While an assessment of the food industry's capacity to support LSFF is relevant to all potential LSFF programming, it is particularly relevant to intermediate result (IR) 2 of the Results Framework: **LSFF in compliance with national fortification standards expanded and sustained by the private sector.**

The tools in this document have been designed to be used in any context where there may already be a history of LSFF, where it is new, or whether in a voluntary or in a mandatory regime. Certain elements of these tools focus on how stakeholders can implement the tools and how they can use the insights generated by the tools to guide LSFF programming decisions.

PRINCIPLES AND ASSUMPTIONS OF THE METHODOLOGY

Principles

1. Food fortification, when it is appropriately designed and implemented, is a cost-effective intervention that provides essential vitamins and minerals through the food vehicles that are industrially processed and widely and regularly consumed by the target population.
2. The private sector should be encouraged and supported to be compliant with fortification standards because it is both socially responsible and good business to meet food quality and safety standards, and fortification costs can be largely or entirely offset by improved efficiencies, financing, and pricing of fortified foods. In order to sustain good quality food fortification performance by industry, stakeholders, including government institutions, should recognize the commercial imperatives of the private sector.
3. A comprehensive assessment of the industrial food industry's capacity to support LSFF will provide value to the food processing sector, governments, and other donors, but the purpose of the methodology is in its ability to generate actionable insights that enable and guide improved LSFF programming. The methodology attempts to clearly connect the assessment methodology to the LSFF Results Framework.
4. Interested entities will elect to work in LSFF and/or to sponsor assessments but are likely to use implementing partners to conduct the assessments. Elements of this methodology should help inform and guide such engagements, while other elements should assist specialist technical practitioners to conduct the assessments.
5. The methodology should be designed in such a way that it can be applied in any market or nutrition context. However, in line with the LSFF Results Framework, such a methodology will have highest relevance in markets where there are existing LSFF standards or regulation, or where there is a pathway to establishing these in additional food and condiment vehicles.

Assumptions

1. Interested institutions have broad familiarity with the LSFF Programming Guide, the potential for systems-level impact through LSFF, and the guiding principles referenced above.
2. Interested institutions will conduct separate assessments or leverage existing work on dietary inadequacies, potential LSFF vehicles, and the policy-enabling environment for LSFF. While elements of this methodology do address these critical issues, they are not the focus of this methodology. This methodology assumes that a shortlist of suitable potential fortification vehicles has already been developed.
3. While there are no existing tools that fully address the stated assessment objective, there are tools that focus on some elements of it. These tools are valuable resources, and this methodology should support practitioners in leveraging these existing resources.
4. Existing assessments of the industrial food industry's capacity to support LSFF may exist, but in most instances, such work will not have been conducted, and it will be necessary to engage with private sector actors to gather such information.

DEFINING THE METHODOLOGY ELEMENTS

An accurate assessment of the industrial food industry's capacity to support LSFF is complex for the following reasons:

- **Multiple stakeholders in market system:** while food processors are the most critical private sector actors in the market system for LSFF, a robust assessment of industrial food industry capacity to support LSFF must also include an assessment of potential fortification premix suppliers; the regulatory environment, including regulatory agencies, nature of any formal regulations, and enforcement procedures; resources for monitoring of fortification procedures, including analytical capability; and availability of external support for financial, commercial, and technical areas.
- **Context-specific:** the appropriate research protocol is context-specific with different questions and/or different parts of the market system being relevant in different LSFF contexts. For example, the research protocol in a market with high levels of fortification regulation and enforcement will differ from the research required where there are limited regulation/voluntary standards.
- **Approach must be tailored to engage the private sector:** an optimal assessment of the industrial food industry would require senior technical and business leadership across all major food processors to answer a long list of commercial and technical questions. In practice, it can be challenging to secure interviews with all participants, and respondents may be unwilling to answer all questions until adequate trust is built. Industry associations, where they exist, can be an ally in this regard at the early stages of the assessment.

Given these complexities, the methodology comprises a set of tools that should be used together to drive toward the most critical insights.

Figure 2: LSFF Feasibility Methodology Tools: Industrial Food Industry Capacity to Support LSFF






The methodology has been developed for each tool to be used in sequence as numbered.

In practice, USAID Missions, other stakeholders interested in launching an LSFF initiative, and implementing partners may find it easier to use the tools in a different order or in parallel. Depending on their technical knowledge and familiarity with such assessments.

Table I on the following page provides further description for each tool in the methodology: its purpose, how it should be used, and by whom.

Table 1: The Tools and Their Functions

DESCRIPTION	 OBJECTIVE	 INTENDED USER	HOW TO USE
Tool 1. Insights Required from an LSFF Market Assessment			
<p>A non-technical tool that: 1) lists each LSFF activity from IR2 of the USAID Results Framework next to the questions that need to be answered through the market assessment to conclude if a particular LSFF activity is appropriate and feasible given the local context, and 2) provides an output template showing the critical insights to be generated, and how to translate those insights into specific activity recommendations.</p>	<p>Drive principal stakeholders responsible for an LSFF initiative toward answering the critical questions in a market system that will help inform a robust project design.</p>	<p>Principal stakeholder(s) interested in an LSFF initiative</p>	<p>Use the questions and the output template as the basis for a scope of work for an implementing partner who will conduct the LSFF market assessment.</p>
		<p>Implementing partner</p>	<p>Use the questions and output template to guide data collection and shape the data into LSFF activity recommendations that align with IR2 of the LSFF Results Framework for a principal stakeholder.</p>
Tool 2. Guidance to Manage and Conduct an LSFF Market Assessment			
<p>A non-technical summary of best practices and key considerations for planning, managing, and conducting the market assessment, based on first-hand LSFF programming experience of the authors and implementing partners who piloted the methodology in two countries.</p>	<p>Provide practical guidance and tips for:</p> <ul style="list-style-type: none"> • Developing a scope of work for an implementing partner relevant to context • Selecting an implementing partner with the appropriate knowledge/skills to lead the assessment • Managing an implementing partner to ensure actionable findings • Maximizing stakeholder engagement for meaningful, accurate, and actionable insights 	<p>Principal stakeholder(s) interested in an LSFF initiative</p>	<p>Use this tool as guidance to recruit and select an IP and inform the scope of work for the IP.</p>
		<p>Implementing partner</p>	<p>Use these tips as practical guidance for implementing the methodology and to effectively secure, plan, and conduct stakeholder interviews for the primary research phase.</p>
Tool 3. Research Protocol			
<p>A technical tool comprised of research questions, methods, and data collection</p>	<p>Structure the assessment and lay out a research plan that ensures</p>		<p>Use as guidance for the key data points to gather and how to gather them if</p>

DESCRIPTION	OBJECTIVE	 INTENDED USER	HOW TO USE
templates for conducting the market assessment. The research questions are organized under seven “issue trees,” each tree focusing on a key LSFF program issue or component.	technical completeness and logic flow in alignment with best practices for LSFF program planning.	Implementing partner	they are not readily available via secondary sources. Complete all seven components. Assess key learning and outstanding items from each component to identify relevant LSFF activities in-line with IR2 of the Results Framework. Input the data/insights into the output template (Tool 1) to document the assessment and structure your findings.
Tool 4. Stakeholder Interview Guides			
Technical questionnaires for primary data collection. Six questionnaires cover: 1) food processors and food importers, 2) finance providers, 3) retailers, 4) premix suppliers, 5) regulatory/enforcement agencies and international institutions, and 6) industry/professional associations.	Guide the collection of primary data from key stakeholders that comprise the LSFF ecosystem.	Implementing partner	Use to facilitate interviews with key stakeholders.
Tool 5. Case Examples			
Executive summaries of output PowerPoints from piloting the assessment methodology in Nigeria and Zambia. These executive summaries informed the design of the output template in Tool 1.	Provide examples of how the methodology has been applied in different markets, including data visualization methods for reference.	Implementing partner	Use for reference while planning and conducting an LSFF market assessment. Note that each assessment output will be context-specific, based on the unique opportunities identified through the research process.



Several tools were assessed for the purpose of incorporating them into this methodology. A detailed review of these tools is contained in the Large-Scale Food Fortification Feasibility Tool Review: Summary Report prepared for USAID and dated January 20, 2022. As illustrated in Table 2 below, the summary report identified key components of a broader-based LSFF feasibility assessment and indicated existing tools that could be incorporated into this assessment methodology.

Existing tools that are incorporated into this feasibility assessment methodology include:

- The [Fortification Assessment Coverage Toolkit](#) (FACT) produced by the Global Alliance for Improved Nutrition (GAIN) plays a role in identifying key brands of potential fortification vehicles for the purpose of market assessment. The following components of FACT are relevant to this methodology:
 - [FACT Market Assessment Forms Template](#): Pages 1–5 provide guidance to determine the availability of different brands of particular food vehicles. The template can be used selectively. For example, the section on ‘Marketplace and Retail Outlet Registration’ could be omitted if this level of detail is not required, and the ‘Brand Registration’ section could be used for selective marketplaces.
 - [FACT Fieldwork Manual for the Market Assessment Template](#): This provides guidelines for conducting a market assessment. Its use will depend on the experience of the people leading the assessment.
 - [FACT Household Questionnaire Template](#): Pages 11–14 relate to consumption levels of designated food vehicles. They may be relevant once food vehicles have been selected to determine fortification levels and which brands of vehicles are used by households.
- Several tools and resources produced by TechnoServe are relevant to the initial feasibility study. The **Micronutrient Fortification Index (MFI) Self-Assessment Tool**¹ can be used by existing manufacturers of fortified foods to determine their capability to introduce additional fortified products. However, unless very detailed information is required, it may be simpler to use the [Questionnaire for Food Processors and Food Vehicle Importers \(Tool 4\)](#) for initial feasibility study purposes.
- The [Fortification Monitoring and Surveillance Tool \(FORTIMAS\)](#) was developed for use in flour fortification projects by Smarter Futures, though it can be extended to other food vehicles. **FORTIMAS** is used for monitoring and evaluating established fortification programs. However, the procedures and resource requirements included in the tool—particularly Chapter I of the manual—should be considered during the feasibility study in conjunction with the 1) [Enabling Environment Analysis](#) in Tool 3 and 2) [questionnaire #5](#) in Tool 4. Note: **FORTIMAS** does not address processor-level quality monitoring systems. It instead focuses on the quality of finished fortified products after distribution to consumers and the related clinical benefits to consumers.

¹ [Kenya Self-Assessment Tool](#); [Nigeria Self-Assessment Tool](#); or [download Excel version on Agrilinks.com](#).

Table 2: Components of LSFF Feasibility Assessment & Prior Content Leveraged

 LSFF Feasibility Assessment Component	 Prior Content Leveraged
1. Nature of Market for Potential Vehicles	
<ul style="list-style-type: none"> ● Market size for potential vehicles ● Nature of manufacturing status for potential vehicles ● Nature of retail distribution status for potential vehicles 	FACT Market Assessment Forms Template (p. 1–5), FACT Fieldwork Manual for the Market Assessment Template, FACT Household Questionnaire Template (pages 11–14), and Solutions for African Enterprises (SAFE)/Alliance for Inclusive and Nutritious Food Processing (AINFP)/SAPFF country mapping studies
2. Technical Feasibility	
<ul style="list-style-type: none"> ● Nature of micronutrient fortification requirement ● Status of fortification of chosen vehicles ● Nature of potential incorporation procedures for proposed micronutrients and vehicles 	
3. Commercial Viability for Processors	
<ul style="list-style-type: none"> ● Motivation for existing fortification activities ● Capacity to introduce fortification ● Nature of existing knowledge of commercial fortification if no fortification is currently undertaken ● Potential suitability of existing manufacturing operation for fortification <p>Nature of commercial requirements for introduction of fortification</p>	SAPFF Fortification Compliance Tool and SAPFF Business Costing Tool



**LSFF Feasibility
Assessment Component**



**Prior Content
Leveraged**

4. Technical Viability for Processors

- Status of existing manufacturing of proposed vehicle
- Status of fortification initiatives for proposed or other vehicles
- How can fortification be incorporated into existing manufacturing processes
- Additional technical resource requirements for incorporation of fortification into manufacturing processes
- Rationale for introducing new vehicle in fortified form

Micronutrient Fortification Index (MFI) Self-Assessment Tool, SAPFF Fortification Compliance Tool, and SAPFF Process Flow Diagram

5. Processor Access to Finance

- Existence of research on access to finance barriers for processors
- Processor access to finance challenges
- Engagement with financial providers

6. Government and Regulatory Role

- Nature of direct government support via regulation
- Nature of government support for non-regulated initiatives

7. Monitoring and Enforcement Procedures

- Monitoring and enforcement practices that are needed
- Existing options/resources for monitoring and enforcement

FORTIMAS Manual (chapter I), MFI Self-Assessment Tool, and SAPFF Fortification Compliance Tool

TOOL I: LSFF MARKET ASSESSMENT INSIGHTS

Description & Objective

Tool I is a non-technical tool designed for use by principal stakeholders interested in LSFF and by implementing partners. It consists of:

- [Table 3: Potential LSFF Activities and Critical Insights](#) which lists each LSFF activity under IR2 of the USAID Results Framework next to the key questions that need to be answered through a market assessment to determine if a particular LSFF activity is appropriate and feasible in the unique context
- [Output Template](#) which shows the critical insights to be generated by the key questions and how to translate this data into LSFF activity recommendations for the principal stakeholder

The objective of this tool is to support implementing partners in generating the most critical data through the market assessment and help them translate this data into specific LSFF activity recommendations from the USAID Results Framework to drive principal stakeholders toward LSFF program action.

How to Use

The principal stakeholder will use the questions in [Table 3](#) and the [output template](#) as the basis for a scope of work for an implementing partner who will conduct the LSFF market assessment.



An implementing partner will use the questions and the output template as a guide to generate critical data and translate it into actionable activity recommendations from the USAID Results Framework. If an implementing partner can answer the questions, specifically the bolded priority questions, they will be able to evaluate the appropriateness and feasibility of each listed LSFF activity.

Under the critical insight questions for each LSFF activity, there is a gray box with a series of **bold** numbers. These numbers reference the seven LSFF program components detailed in [Tool 3](#) that will help implementing partners answer the most critical questions to determine if a specific LSFF activity is context-appropriate. *Note:* this part of the tool is intended for reference, not as a shortcut to the assessment process. The implementing partner will complete the full market assessment before recommending one or more LSFF activities to the principal stakeholder.

How Tool I Interacts with the Other Tools

Together, Tools I and [2](#) (Guidance to Manage and Conduct an LSFF Market Assessment) will be used to develop the scope of work for an implementing partner. The data collected using [Tools 3](#) (Research Protocol) and [4](#) (Stakeholder Interview Guides) is needed to complete the [output template](#) in Tool I. The executive summaries in [Tool 5](#) (Case Examples) informed the design of the [output template](#) in Tool I and can be used as a reference by implementing partners as they complete the output template.

Table 3: Potential LSFF Activities and Critical Insights

 <p>IR2 Activity Description</p>	 <p>Critical Insight Questions</p>
<p>2.1.1 Industry Mapping</p>	
<p>Food industry mapping/scoping/analyses of industrial/large-scale food processing and consumption of potential food fortification vehicles (e.g., cereal flours, rice, edible oil, sugar, salt, bouillon cubes, and dairy products) considering past trends and projecting forward 5, 10, and 20 years, including geographic and socioeconomic coverage.</p>	<p>Priority</p> <ul style="list-style-type: none"> • What is the segmentation of end-use markets from the processing sector (e.g., formal vs. informal, urban vs. rural)? • How is the processing sector segmented by scale of processor? How is this anticipated to change? • How is processing sector demand forecasted to grow? <p>Additional</p> <ul style="list-style-type: none"> • What are the historical processing sector growth dynamics? • What are the main drivers of growth in the sector? <p>Assessment Component I</p>
<p>2.1.2 Business Level Technical Assistance and Knowledge Transfer on Fortification in Staples</p>	
<p>Support adoption and application of fortification standards by food industry and offsetting of fortification costs through improved business planning, operational efficiencies, simplified quality assurance (QA)/quality control (QC), and marketing, distribution, and sales of fortified foods. Provide food technology and marketing assistance to food processors to maximize the value of by-products (e.g., bran drying) to offset fortification costs. Engage in dialogue with the government on how to fairly transfer fortification costs into food prices and improve access to loans to cover capital costs associated with fortification.</p>	<p>Priority</p> <ul style="list-style-type: none"> • What is the existing fortification standard? • Do target processors currently fortify in-line with the standard? • Are target processors of sufficient scale for viable commercial fortification? • Do processors have the technical capacity (equipment, facilities) to fortify to standard? • Are target processors interested in receiving technical assistance on core commercial elements? (business planning, operational efficiencies, marketing) • What is the capacity of existing regulatory bodies to enforce the standard? <p>Additional</p> <ul style="list-style-type: none"> • Do target processors express interest in fortifying in-line with the standard? • Do target processors have the technical know-how to fortify in-line with the standard?

	<ul style="list-style-type: none"> • Do target processors display access to adequate collateral management and records to access finance? • How much cost would fortification add to the cost of raw materials/cost of goods sold for target processors? • What is the quantity of financing required for target processors to pursue LSFF? How does this compare to total apex and/or typical annual capex? • Is there potential for opportunity efficiency and quality enhancement to offset costs from fortification for target processors? • Are there technical opportunities to improve capacity utilization and/or operating efficiency? • Could target processors drive top-line sales growth from brand premiumization tied to fortification? • Is there any evidence of additional food technology/by-product opportunities to engage target processors?
Assessment Components: 3 & 4	
2.1.3 Traceability and Compliance	
<p>Strengthen compliance with labeling standards and digital systems for internal management and QC, as well as digital traceability and tracking of foods that may not meet food quality and safety standards, including compliance with food fortification standards.</p>	<p>Priority</p> <ul style="list-style-type: none"> • Do target processors have access to laboratory capabilities and adequate QA/QC systems to ensure and monitor fortification quality of their products? • Do target processors appear to be adhering to national quality and safety standards? • What is the capacity of the regulatory body to monitor, enforce, and advise processors on food quality and labeling? <p>Additional</p> <ul style="list-style-type: none"> • Do target processors utilize traceability labels? • Are there standards on food quality and labeling in relevant systems?
Assessment Components: 4 & 6	
2.1.4 Premix Availability and Compliance	
<p>Strengthen free market production, procurement processes (including financing), and distribution systems to</p>	<p>Priority</p> <ul style="list-style-type: none"> • What is the number and scale of existing premix/fortificant suppliers, both local and international?

<p>ensure premix availability, quality, and traceability. Explore the potential of dedicated premix businesses, including regional operations, which would sell/distribute premix to millers or other food processors within/across countries, including long-term pricing agreements.</p>	<ul style="list-style-type: none"> ● What is the premix pricing in the market, and how does this compare to the relevant regional benchmark? ● Do processors express demand for new premix solutions beyond those available? ● What is the enabling environment for imported premix? <p>Additional</p> <ul style="list-style-type: none"> ● What are the existing local premix standards and/or regulations? ● What (anecdotal) evidence is there attesting to the capacity of the domestic regulator to effectively monitor the industry?
<p>Assessment Component: 2</p>	

2.1.5 Business Level Technical Assistance and Knowledge Transfer on Processing and Packaging

<p>Improve the processing and packaging of cooking oils to increase stability of vitamin A and other nutrients (e.g., vitamins D and E and essential fatty acids) added as fortificants, including use of low-cost packaging that preserves quality of the food content.</p> <p><i>Cooking oil is the focus for this activity; however, these questions can be applied to sugar and other food vehicles.</i></p>	<p>Priority</p> <ul style="list-style-type: none"> ● What proportion of the packaged vehicle is imported versus produced locally? ● Is imported product inspected to fortification standards? ● Do local processors of the vehicle have the technology and know-how to fortify to standards? ● Is existing packaging adequate to maintain integrity of the fortified products in the market? ● Are target processors interested in employing improved packaging? What is their main motivation for this? ● What is the presence (or lack of presence) of standards on packaging in food system? <p>Additional</p> <ul style="list-style-type: none"> ● What is the availability of local suppliers of relevant technologies of improved packaging in the target market? ● What is the cost competitiveness or premium of improved packaging vs. existing solutions?
<p>Assessment Component: 4</p>	

2.1.6. Business Level Technical Assistance and Knowledge Transfer on Fortification in Processed Foods

Promote the use of fortified ingredients (i.e., fortified staples and condiments) in processed, blended foods. Explore the use long-chain essential fatty acids (e.g., docosahexaenoic acid (DHA)-producing algae and fish powder) to enhance the nutrient content of blended foods.

Priority

- To what extent could the proposed vehicles extend micronutrient intake by the target population through their use as ingredients in other foods?
- Are the proposed dosages for the target micronutrients in the proposed vehicles sufficient to achieve this?
- Could regulatory provisions be made for compulsory use of fortified variants of the proposed vehicles as ingredients?

Assessment Components: 2 & 6

2.1.7 Market Incentives

Support the development, deployment, and scaling-up of tools and brand/marketing indices to improve QC and compliance with fortification standards within the food industry, e.g., premix reconciliation calculation audits, the MFI piloted by SAPFF/TechnoServe, as well as consumer advocacy to link brand identity with quality indices.

Priority

- What evidence is there attesting to the target processors fortifying in-line with established standards?
- What (anecdotal) evidence is there attesting to the capacity of the domestic regulator to effectively monitor the industry?

Additional

- Do target processors currently collect data on quality as part of their manufacturing processes?
- Do quality systems exist that allow for verified comparable data to be collected for a majority of fortified brands?
- Is there presence of “champions” from leaders of top brands who are willing to convene and be transparent with their fortification quality?

Assessment Components: 3, 4, & 6

2.1.8 Market Associations	
<p>Promote private sector engagement to foster and support national fortification alliances using various platforms, including trade associations, chief executive officers (CEOs) of fortified foods producers, and industry leaders as champions for fortification, and the Scaling Up Nutrition (SUN) Business Network.</p>	<p>Priority</p> <ul style="list-style-type: none"> ● What are the existing associations that could offer entry points to engage public-private collaboration? ● What are the existing programs and platforms that could be leveraged to support CEO-level engagement/commitment from target food processors? <p>Additional</p> <ul style="list-style-type: none"> ● What are the existing associations that display interest in improving fortification levels of constituents? ● What types of support do these organizations claim to require? Can those claims be verified?
<p>Assessment Components: 1, 3, 4, 6</p>	
2.2.1 Study on Costs of Food Fortification	
<p>Conduct studies on the capital and recurrent costs of staple food fortification within the food industry and the effects of costs on pricing and margin of profit.</p>	<p>Priority</p> <ul style="list-style-type: none"> ● Do studies already exist on this topic? ● <i>If so</i>, are these studies relatively recent, complete, and of high quality?
<p>Assessment Component: 5</p>	
2.2.2 Collaboration with DFC and DFIs on Access to Finance for Fortifying Businesses	
<p>Work with the U.S. Development Finance Corporation (DFC) to increase food fortification-compliant industry's access to finance (including foreign exchange transactions for fortificant and food processing equipment imports). Leverage additional financing support for food industry from other Development Finance Institutions (DFIs), e.g., European Union DFIs.</p>	<p>Priority</p> <ul style="list-style-type: none"> ● Do target processors currently fortify in-line with the standard? ● <i>If not</i>, would improved access to finance incentivize them to fortify in-line with the standard? <i>If so</i>: <ul style="list-style-type: none"> ○ What access-to-finance challenges are they experiencing? ○ What would they seek financing for? ○ What amount of financing would they require?

	<p>Additional</p> <ul style="list-style-type: none"> • Can the DFC and DFIs be involved in any of the illustrative access to finance interventions to address the identified access to finance challenges? • Do target processors meet requirements to access finance through the DFC and DFIs? <p>Assessment Components: 3, 4, 5, 6</p>
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2.2.3 Business-Level Advisory Services to Address Financing Gaps

<p>Support advisory services to food companies engaged in food fortification to improve access and address gaps in financing.</p>	<p>Priority</p> <ul style="list-style-type: none"> • Do target processors currently fortify in-line with the standard? • <i>If not</i>, would improved access to finance incentivize them to fortify in-line with the standard? <i>If so</i>: <ul style="list-style-type: none"> ○ What access-to-finance challenges are they experiencing? ○ What would they seek financing for? ○ What amount of financing would they require? • Are target processors interested in receiving advisory services to address access to finance gaps? <p>Assessment Components: 3, 4, 5, & 6</p>
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Output Template

This 14-page PowerPoint template outlines the critical data and insights that should be generated during the LSFF market assessment and how to translate them into LSFF program recommendations aligned with the LSFF Results Framework. Below is a description of each slide with guidance on how to use the data from the slide to determine relevant activities from the Result Framework. Images of the slides are located in the [Annex. Download](#) a PDF version of the PowerPoint template.

SLIDE 1: TITLE & RESEARCH OBJECTIVE

SLIDE 2: SCOPE OF THE ASSESSMENT: Establishes the context and scope of the LSFF assessment, specifically food and condiment vehicles; rationale for their selection; and definition of industrial processors. The definition and daily volumes for industrial processors can vary by country.

SLIDE 3: HISTORICAL CONTEXT: LSFF IN COUNTRY X: Summary of fortification legislation, programming, donors, implementing organizations, and challenges/successes in the focus country.

SLIDE 4: KEY MARKET DYNAMICS: Establishes key market dynamics to help shortlist food and condiment vehicles for deeper study. The Global Fortification Data Exchange ([GFDx](#)) is a helpful source for some of these data points. Highlight each box in the appropriate color to show prospects for LSFF program impact based on the legend.

- **Industry Compliance Gap** = difference between 100 percent compliance and the estimated percent compliance at retail stage, if available via secondary sources. A bigger gap signals greater opportunity for impact via an LSFF program. If compliance data is not available, market sampling can be done using the [FACT Market Assessment](#).
- **Percent Processed Domestically** = percent of domestic consumption processed in-country.

Guidance for Results Framework Activities: When data is not available via secondary research, it denotes scope for **Sub-IR 2.1.1**. A significant compliance gap denotes scope for **Sub-IR 2.1.7**.

SLIDE 5: TOP 5-10 PROCESSORS OF TARGET VEHICLES: Lists the top industrial-scale processors for each of the targeted vehicles.

- **Top industrial firms** = the 5-10 food processors with the highest market share for each targeted vehicle in the country.
- Researchers can identify and rank primary industrial processors through secondary research, where available. It can also be filled through primary interviews with industry associations. This data can help the researchers target key processors for interviews to assess their capabilities.

SLIDE 6: DEFINITIONS OF FOOD PROCESSOR CAPABILITIES: Establishes the key technical and commercial criteria for evaluating food processors' capability and readiness to deliver LSFF.

SLIDE 7: CAPABILITIES OF INDUSTRIAL-SCALE PROCESSOR: Summarizes technical and commercial capabilities of industrial food processors in each of the targeted food and condiment value chains. This can be completed through processor interviews. Color each box based on the legend.

Guidance for Results Framework Activities: This data can help determine the scope for adding value through **Sub-IR 2.1.2**, **Sub-IR 2.1.3**, and **Sub-IR 2.1.5**.

SLIDE 8: ESTIMATED AVERAGE COSTS OF FORTIFICATION: Estimates the incremental costs of fortification. This data can be collected from secondary sources or can be estimated using the Food Fortification Initiative's (FFI's) cost-benefit tool. This tool helps compare the estimated cost of implementing a national fortification program to the benefits the program will generate in return, also referred to as the cost: benefit ratio.

Guidance for Results Framework Activities: If cost data is not available through secondary resources, there might be high scope to add value through **Sub-IR 2.2.1**.

SLIDE 9: INDUSTRY CONSTRAINTS/ECOSYSTEM CHALLENGES: Summarizes the capacities and constraints of key stakeholders in the LSFF ecosystem, considering value chain-specific capacities and constraints and ecosystem capacities and constraints that cut across value chains. Key stakeholders include food processors, regulatory/monitoring agencies, industry/market associations, finance providers, consumers/civil society, premix suppliers, importers of raw materials, distributors/retailers, and marketers.

Guidance for Results Framework Activities: Helps to estimate the potential value-add of **Sub-IR 2.1.2**, **Sub-IR 2.1.4**, and **Sub-IR 2.1.8**.

SLIDE 10: ACCESS TO FINANCE: Summarizes access to finance challenges for industrial food processors in each of the targeted food/condiment value chains.

Guidance for Results Framework Activities: This can help determine the scope for adding value through **Sub-IR 2.2.2** and **Sub-IR 2.2.3**.

SLIDE 11: SUMMARY OF LSFF FEASIBILITY PER VEHICLE: Summarizes key data points from previous slides to help prioritize LSFF programming. Vehicles can be prioritized (orange box) based on:

- **Status of mandate:** feasibility of LSFF expected to be higher when mandatory
- **Compliance gap:** potential impact of LSFF programming expected to be greater when the compliance gap is larger
- **Percent processed domestically:** recommended actions will depend on whether the vehicle is primarily processed locally or imported
- **Share of industrial processors:** feasibility of LSFF expected to be higher when the share of industrial processors is larger
- **Percent of households consuming the vehicle:** potential impact of LSFF program expected to be greater when percent of households consuming the vehicle is higher
- **Processors' interest in LSFF:** feasibility of LSFF expected to be higher with greater processor interest
- **Processors' LSFF capabilities:** LSFF feasibility is expected to be higher with stronger technical and commercial processor capabilities. Recommended actions will depend on the technical and commercial capabilities of processors

Other themes: Regional and stakeholder priorities, etc.

SLIDE 12: LSFF OPPORTUNITIES FOR PRIORITY VEHICLES: Summarizes the recommended LSFF program strategy and approaches for each priority vehicle. The following questions are intended to help the researchers complete the table:

1. Given the context and the challenges and opportunities surfaced during the research, what is the recommended overarching LSFF strategy for each priority vehicle?
2. What forms of support to industrial processors seem to offer the greatest potential for enabling them to advance LSFF?
3. What types of improvements to the enabling environment (monitoring agencies, international organizations, etc.) have the greatest potential for improving LSFF feasibility and compliance?
4. What types of changes to support services (premix supply, access to finance, etc.) have the greatest potential for improving LSFF feasibility?

SLIDE 13: VALUE ADD OF RESULTS FRAMEWORK ACTIVITIES: Summarizes the estimated value addition of IR2 activities from the USAID LSFF Results Framework. Paste the appropriate Harvey Ball (see legend) into each box to show the projected value-add of each Sub-IR activity for each shortlisted vehicle. Highlight in **yellow** all boxes with Harvey Ball scores of 4 and 5.

SLIDE 14: PRIORITY RESULTS FRAMEWORK ACTIVITIES: Highlights the Sub-IR activities from IR2 that present the highest estimated value add.

On the left (red boxes): copy/paste all Sub-IR activities from slide 13 that have at least one Harvey Ball score of 4 or 5 (see **yellow** highlight).

On the right: For each of these Sub-IRs, write the rationale and the emerging impact opportunity for each vehicle with a score of 4 or 5.

TOOL 2: GUIDANCE TO MANAGE AND CONDUCT AN LSFF MARKET ASSESSMENT

Description & Objective

Tool 2 is a non-technical summary of best practices and key considerations for planning, managing, and conducting the market assessment. This tool is intended to help the primary stakeholder to:

1. Develop a scope of work for an implementing partner relevant to context
2. Select an implementing partner with the appropriate knowledge and skills to successfully lead the market assessment
3. Manage an implementing partner to ensure the market assessment delivers actionable findings
4. Share best practices with an implementing partner for effectively applying the methodology and maximizing stakeholder engagement in order to generate meaningful, accurate, and actionable insights

The guidance in this tool is based on the expertise and first-hand LSFF programming experience of the developers of this methodology and insights from piloting this methodology in two countries.

How to Use

Before the assessment, the primary stakeholder can use this tool to help recruit and select an implementing partner and to inform the scope of work for the implementing partner. During the assessment, the implementing partner can use these tips as practical guidance for implementing the methodology and to effectively secure, plan, and conduct stakeholder interviews for the primary research phase.

How Tool 2 Interacts with the Other Tools

Tool 2 provides practical guidance for conducting the market assessment ([Tool 3: Research Protocol](#)), with particular focus on stakeholder interviews ([Tool 4: Stakeholder Interview Guides](#)).

Developing a Scope of Work for an Implementing Partner Relevant to Context

The primary stakeholder should principally use [Tool 1: LSFF Market Assessment Insights](#) to inform a scope of work for an implementing partner that aligns with USAID's LSFF Results Framework.

The primary stakeholder will need to decide on which **food vehicles** to focus the assessment. There is a set of factors that will need to be considered together to inform the breadth of food vehicles to be covered. These include:

- Results from application of other LSFF feasibility studies: i) dietary inadequacy and potential food vehicle methodology and ii) policy enabling environment for LSFF, *if these methodologies have been conducted*
- Current fortification priorities of local government in terms of current policy and policy under consideration
- Prior USAID and other donor investments in LSFF in the market under consideration

- The mechanism under which such an assessment is to be conducted
- Availability of time and resources to conduct the assessment

Based on these factors, the principal stakeholder will need to determine which of the following options best fits their needs:

1. A comprehensive assessment of LSFF potential across all food vehicles that could potentially be considered. This deliverable will be expansive and may require more time and resources.
2. A two-step process that captures market and enabling environment data across a broad set of food vehicles (See Slide 4 of the output template) before focusing on a subset of food vehicles that exhibit market and consumption dynamics conducive to LSFF.
3. A focused assessment across a narrower subset of food vehicles where there is broad consensus on the relevance and need for LSFF.

Selection of the appropriate option will likely benefit from consultation with LSFF fortification experts at a global or country level.

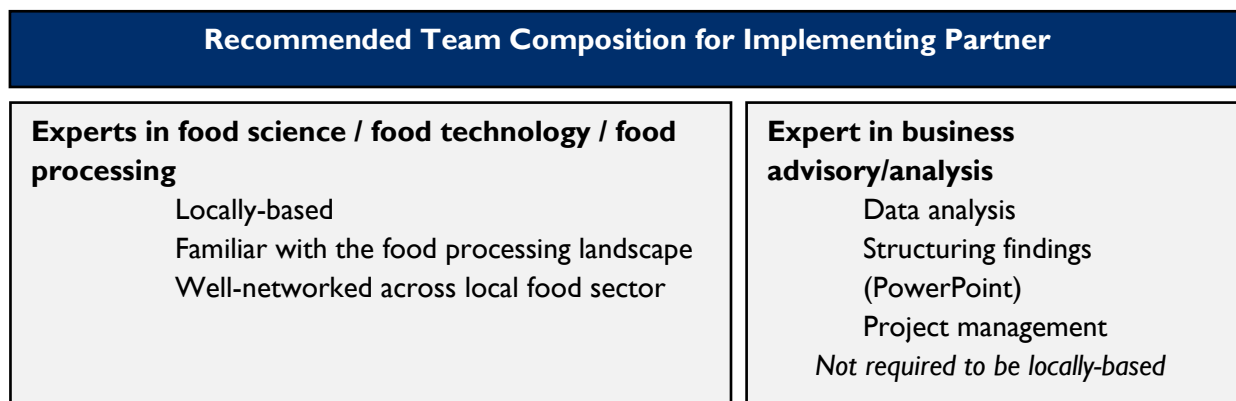
Selecting an Implementing Partner

The following knowledge areas and skillsets are critical to leading a successful LSFF feasibility assessment:



It is also critical that the implementing partner is familiar with the local food processing landscape, is well-networked across the local food sector, and has a local presence.

Because it is challenging to find one person who meets all of these requirements, and because a multi-person team is ideal for conducting stakeholder interviews, particularly within the limited timeframe for the assessment, the following team composition is recommended for the implementing partner:



Being well-connected in the local food sector enables the implementing partner to take the lead on engaging stakeholders, rather than relying on the primary stakeholder organization to facilitate those connections. Expertise in food science/food technology/food processing brings the following benefits to the LSFF feasibility assessment:

- Knowledge of credible data sources, as well as studies/surveys that are in-progress
- A pulse on what is happening in the food sector
- Familiarity with the challenges and opportunities related to LSFF
- Accelerates trust-building, particularly with food processors
- Well-suited to assess capacity of food processors to support LSFF, particularly technical capacity
- Credibility among stakeholders (sharing findings from the assessment with stakeholders via a validation session)

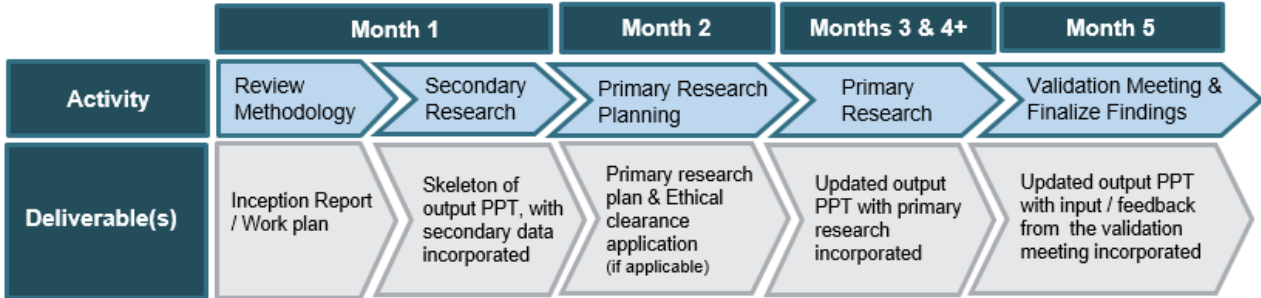
A business advisory skillset addresses the need for effective project management, strategic analysis of the research data, and a clear, polished, and engaging presentation of the research findings in PowerPoint format. Be sure to request a sample, redacted PowerPoint deck from the partner as part of the implementing partners selection process.

When selecting the implementing partner, you may consider a firm or a combination of individuals who collectively meet the required skills and expertise. Working with a combination of individuals may provide more flexibility and assurance that the people who are contracted will be the ones to carry out the work, while a firm brings the benefit of having pre-coordinated roles and experience working together.

Managing an Implementing Partner

Two key tools for managing an implementing partner are regular check-ins and deliverable review sessions. It is recommended that the principal stakeholder appoint a Project Manager to serve as the main point of contact for the implementing partner. Once an implementing partner is onboarded and the assessment is underway, the Project Manager should establish a regular check-in (recommended: biweekly). The purpose of the check-in is to ensure the assessment is moving in a direction that will deliver actionable findings and to discuss/troubleshoot challenges.

It is also recommended that the Program Manager organize a deliverable review session following the submission of each project deliverable by the implementing partner. The purpose of the review session is to share and discuss feedback on the deliverable with two objectives: achieve alignment between the implementing partner and the primary stakeholder and ensure high-quality content. The Program Manager should include relevant colleagues from the principal stakeholder in reviewing each deliverable and attending each review session. Below is an illustrative example of an assessment timeline (suggested: 4–5 months) with key deliverables:



Preparing for the Assessment: Before the Implementing Partner Starts

- **Think about ideal timing for the assessment.** What are the busiest months for food processors and other stakeholders who you want to engage? To increase the likelihood of their participation, *avoid conducting the assessment during stakeholders' busiest months*. For example, food processors (and others) are particularly busy in November/December with end-of-year marketing and sales activities.
- **Find out if ethical clearance is required for the primary research phase of the assessment** before you bring an implementing partner onboard. Some countries require ethical clearance to be obtained from the government or a third-party ethics body for any research involving human participants. If ethical clearance is required for primary research, build adequate time into your assessment plan (recommended: 4 weeks) for the implementing partner to prepare the materials requested in the ethical clearance application, respond to potential follow-up questions from the ethics body, and await approval.
- **If required by the ethics body, prepare a consent form for implementing partners to use during the primary research phase.** The ethics body might require proof that you obtained participants' consent prior to interviewing them, and they could request it long after the assessment is completed. Preparing this form before the implementing partner starts can save time/resources.
- **Prepare a letter on your organization's letterhead and a draft email to introduce the assessment and the research team to potential institutional participants and to request the institution's collaboration.** It is important to inform and obtain support from government leaders, industry associations, and company leadership at the beginning. Once you and the implementing partner align on a target list of institutions, decide who (you or the implementing partner) is best suited to contact each target institution based on existing relationships. Provide the official letter and the draft email to the implementing partner so that they may reach out to their set of agreed-upon institutions. For the institutions you are best suited to contact, consider having a discussion with each to explain the purpose/context of the study before sharing the formal letter. Preparing the letter and draft email before the implementing partner starts can save time/resources.

Tips for Implementing Partner: Applying the Methodology Effectively

- Engaging the private sector directly on nutrition can be met with distrust by some civil society activists and government officials who are uncomfortable with a private sector role in development programming. **Understanding the ideological dynamics of the country context and key influencers to identify risks and positive influencers is an important first step.** Engaging and aligning with respected and influential academics and academic institutions can help to bridge the divide between private, public, and civil society stakeholders.
- **It is worthwhile understanding how industry is organized to manage competition and influence government** (i.e., are processors in the sector served by an industry association?). Associations, industry-wide initiatives, industry-supported institutions (including research institutions), and advanced market commitments for industrially processed foods (i.e., food aid, school feeding programs) can be useful allies in accelerating the introduction and scale-up of LSFF.
- **It is important to establish what percentage of the vehicle is processed locally versus processed externally and imported.** For vehicles that are primarily imported, a government may

consider approaching the exporting company, communicating the national standards, and paying a higher price to import a fortified product that meets standards.

- **In contexts where fortification standards already exist, be aware of what entity created the standard and what entity monitors fortification content levels.** Ensure that the market assessment clearly captures this dynamic and the capacities of these existing entities.
- **Include externalities in the assessment of feasibility.** These can include influence (positive and negative) of other agencies and initiatives (i.e., United Nations, regional bodies) that are driving government priorities in the food and food processing sector; influence of other development imperatives (i.e., foreign exchange controls that limit access to fortification inputs, and sector investment), or poverty/job creation focus that can drive political influence toward programs that prioritize community-based action at the expense of market-based solutions.

Tips for Implementing Partner: Best Practices for Engaging Stakeholders

Securing Interviews

- **Consider first emailing the introduction letter to target interviewees using the draft email language provided to you by the principal stakeholder. However, rather than relying on these emails (and potentially phone calls), it may be more effective to visit the target institutions in-person** to introduce yourselves and the study, share the letter, and schedule an interview for a later date. During the pilots of this methodology, the number of willing participants increased as a result of in-person visits to the institutions versus reliance on emails and phone calls for outreach and scheduling. Be sure to bring a copy of the letter to in-person visits. Institutions may request documentation stating the purpose of the data collection and for whom the data is being collected.
- **Schedule interviews with industry associations before interviews with food processors.** This can provide helpful industry context to inform your conversations with individual processors, and industry associations may be willing to make warm introductions to their member companies. A warm introduction to a processor helps to build trust, increasing the likelihood of a response and willingness to share company information.
- **As much as possible, request for interviews to be in-person.** In-person interviews have the following advantages over virtual interviews or written responses: tend to allow for more time, additional subject matter experts from the institution can join the conversation in case the main interviewee is unable to answer a question(s), and researchers can observe processing facilities to determine technical capacity for fortification. If it is not possible to conduct the interview in-person, a virtual interview is the next best option. For virtual interviews, consider scheduling two, one-hour sessions to ensure completeness of responses.
- **Beyond the planned interviewee, obtain contact information for additional people at the institution.** In case the planned interviewee cannot make the appointment at the last minute, you may be able to speak with one of the alternate contacts to avoid having to reschedule.
- **If you do not receive a response from an organization after multiple attempts to schedule an interview, ask the principal stakeholder to consider helping to facilitate.**

Preparing for Interviews

- **Ahead of an interview, review the appropriate interview questionnaire ([See Tool 4](#)) and tailor it to the interviewee, as necessary.** Based on information you have obtained from other sources, you may consider rewording a question, requesting *validation* of a data point that you have already gathered, or potentially skipping a question(s).
- **If/when possible, conduct stakeholder interviews in pairs.** This allows for one researcher to ask the questions and maintain eye contact with/stay engaged with the interviewee while another researcher records the responses. Having two researchers present also ensures completeness of information captured.
- **Based on the institution being interviewed, have the research team member with the most relevant experience/expertise lead the interview.** This often helps accelerate the trust-building process.
- **Prepare a contact form for respondents to fill out after the interview.** This should solicit the following information: name of institution, name of respondent, position of respondent, phone number, and email address. This is useful for contacting respondents after the interview to address follow-up questions or to invite them to stakeholder alignment forums.

Conducting Interviews

- **Before you start an interview:**
 - Remind the participant of the intent of the interview
 - Be clear about how the information will be used
 - Assure participants of the confidentiality of the information that they will provide and confirm that the data will not be shared with third parties or be traced to the institution
 - Have the respondent sign the consent form
 - Let respondents know how you plan to take notes (on paper or digitally)
- **Where possible, record answers digitally versus on paper** (i.e., questions with options and checklists). This can save time and will be easier to analyze and compare later. For example, during the pilots, researchers used Kobo Toolbox to record financial institution and processor interviews.
- **Ask the more sensitive financial questions near the end of the interview**—the interview questionnaires are structured this way ([See Tool 4](#)). This is intended to ensure the interview yields valuable insights even if the respondent is hesitant in sharing financial information.
- **Where participants deviate from the question posed, allow them to respond freely and highlight other priorities and concerns beyond the scope of the survey.** Be well-versed in the questionnaire and avoid asking questions that participants have already addressed organically during the conversation.

After the Interviews

- **Request the interviewee's permission to follow-up** in case there are additional questions and let them know that there may be a validation session (details below).

- **Store the consent forms securely for a substantial period of time as prescribed by the ethics body** (if applicable). It is possible that the ethics body may require proof that you obtained the respondent's consent to interview.

Validating the Research Findings

When the primary research phase is complete, organize a validation session with key stakeholders to confirm the accuracy of the assessment findings/recommendations. The two objectives of the validation session are to: 1) share with stakeholders the key findings from the LSFF feasibility assessment with regard to the greatest opportunities for expanding LSFF in collaboration with the industrial food sector and 2) gather and discuss feedback from stakeholders in response to the findings shared with a goal of confirming the accuracy of the findings.

The validation meeting may be held in-person or virtually. Ensure representation across the key stakeholder categories. Consider inviting organizations that participated in the research and organizations that did not participate but are part of a key stakeholder group.

It is recommended that the primary stakeholder organization and the implementing partner lead the session together—the primary stakeholder organization providing the background information (motivation, purpose, process) and the implementing partner sharing the findings and leading the question-and-answer portion.

TOOL 3: RESEARCH PROTOCOL

Description & Objective

Tool 3 is a technical tool comprised of research questions, methods, and data collection templates for conducting analyses of the market, industry, and enabling environment to enable an assessment of LSFF feasibility in a given context. The research questions are organized under seven “issue trees.” Each “tree” focuses on a key LSFF program “issue” or component. These are: 1) nature of the market for potential food/condiment vehicles, 2) technical feasibility, 3) commercial viability for food/condiment processors, 4) technical viability for processors, 5) processor access to finance, 6) government and regulatory role, and 7) monitoring and enforcement procedures.

The objective of Tool 3 is to help an implementing partner gather the data it needs to be able to assess the capacity of industrial-scale food processors to fortify staple foods and condiments from a whole-of-business perspective, given LSFF legislation, standards, and regulatory control in the unique context. Based on this assessment, the implementing partner will recommend to a principal stakeholder context-appropriate and feasible LSFF activities aligned with IR2 of the USAID LSFF Results Framework.

How to Use

The implementing partner will complete all seven components of Tool 3. Using the data they collect, the implementing partner will generate a status summary of the market system, as illustrated below. The status summary will identify for each component: key findings, outstanding items to be resolved, and requirements for resources and/or support. Based on this summary, the implementing partner will develop recommendations for principal stakeholders regarding relevant LSFF activities aligned with IR2 of the USAID LSFF Results Framework.

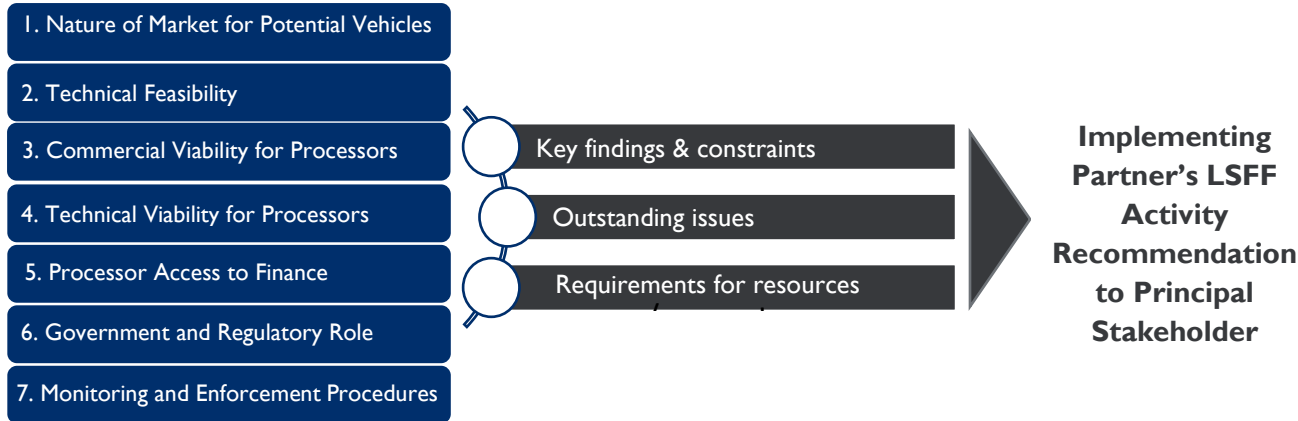


Table 4 below lists the research tools that an implementing partner can use to address key questions in the market system for each of the seven components or “issue trees.”

How Tool 3 Interacts with the Other Tools

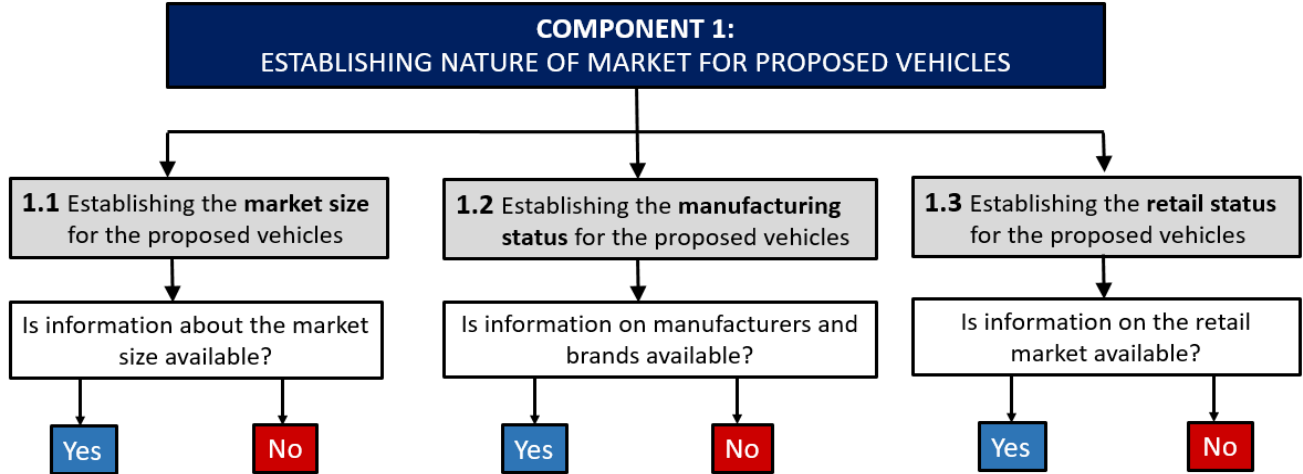
Tool 3 structures the assessment and lays out the research plan for collecting key data. The questionnaires in [Tool 4](#) (Stakeholder Interview Guides) are critical for collecting primary data. The data collected using Tools 3

and 4 is needed to complete the output template in [Tool 1](#) (LSFF Market Assessment Insights). [Tool 5](#) (Case Examples) provides samples of completed output templates for reference.

Table 4: Research Protocol: Market, Processor, and Enabling Environment Analyses

Market-Level Analysis	Component Research Tools	Shared Research Tools
COMPONENT 1: Nature of Market for Potential Vehicles	<ul style="list-style-type: none"> ● Issue Tree ● Data Collection Template ● Interview Guides: [Tool 4] <ol style="list-style-type: none"> 1) Industry/Professional Associations 2) Retailers 3) Premix Suppliers 	
COMPONENT 2: Technical Feasibility	<ul style="list-style-type: none"> ● Issue Tree ● Data Collection Template 	<i>Output template slides: 2, 3, 4, 5 [Tool 1]</i>
Processor-Level Analysis		
COMPONENT 3: Commercial Viability for Processors	<ul style="list-style-type: none"> ● Issue Tree ● Summary of Processor Volume Information 	<ul style="list-style-type: none"> ● Interview Guide: [Tool 4] - Processors & Importers
COMPONENT 4: Technical Viability for Processors	<ul style="list-style-type: none"> ● Issue Tree ● Interview Guide: [Tool 4] - Premix Suppliers 	
COMPONENT 5: Processor Access to Finance	<ul style="list-style-type: none"> ● Issue Tree ● Interview Guide: [Tool 4] - Finance Providers ● Illustrative access to finance interventions 	
		<i>Output template slides: 6, 7, 8, 10 [Tool 1]</i>
Enabling Environment Analysis		
COMPONENT 6: Government and Regulatory Roles	<ul style="list-style-type: none"> ● Issue Tree ● Data Collection Template 	<ul style="list-style-type: none"> ● Interview Guide: [Tool 4] - Policy / Regulatory / Enforcement Agencies & International Orgs.
COMPONENT 7: Monitoring and Enforcement Procedures	<ul style="list-style-type: none"> ● Issue Tree ● Data Collection Template 	
		<i>Output template slide: 9 [Tool 1]</i>
SUMMARY ANALYSIS		
Summary Findings and Principal Stakeholder Guidance Template		
<i>Output template slides: 11, 12, 13, 14 [Tool 1]</i>		

Market-Level Analysis

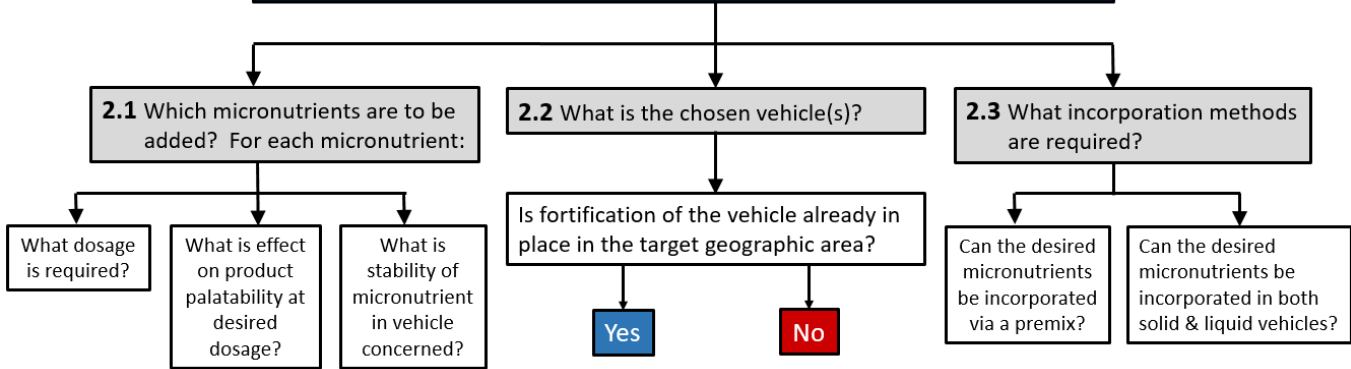


- What information is needed?
- What are the options for gathering this information?
 - Existing tools (i.e., FACT) versus creating new tools
 - Informal methods (i.e., stakeholder interviews, shelf space allocation assessments in retail outlets) versus formal methods (i.e., market research study)
- Can information be extrapolated from a limited number of sources to provide meaningful data?
- In markets comprised of small/informal traders or small companies/unbranded products, can the data be quantified?
- What resources (people, funding, infrastructure) are needed?

KEY QUESTIONS

DATA TO COLLECT		Is this data available?	What are the findings?	What is the source(s)?	Is the quality of the data sufficient?	<i>IF quality data is <u>not</u> available:</i> How can an acceptable estimate be obtained?
1.1	Market size of vehicle					
1.2	Market volume shares at manufacturing level					
	Share of small and informal manufacturers					
	Market trends at manufacturing level					
1.3	Market volume share at retail level					
	Share of small and informal traders					
	Market trends at retail level					

**COMPONENT 2:
TECHNICAL FEASIBILITY OF FORTIFICATION FOR CHOSEN VEHICLE(S)**



- What information is needed?
- What are the options for obtaining this information?
- What resources (people, financial, infrastructure) are required to obtain this information?

KEY QUESTIONS

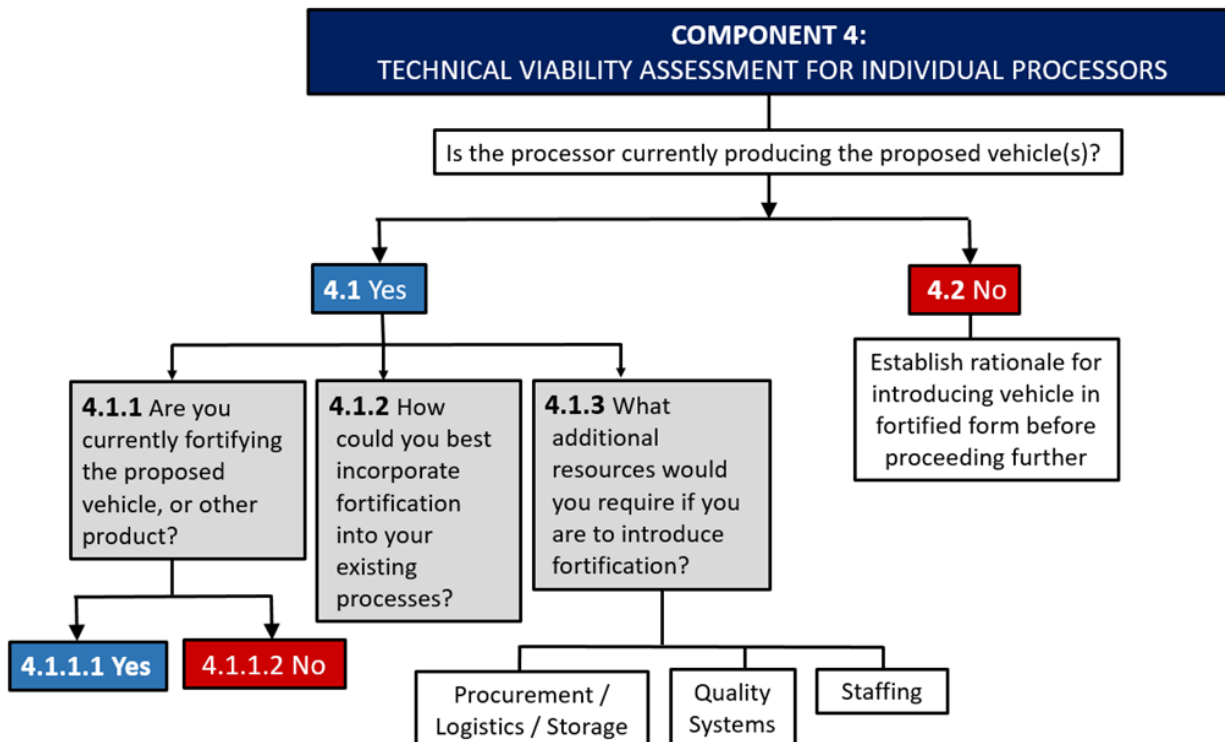
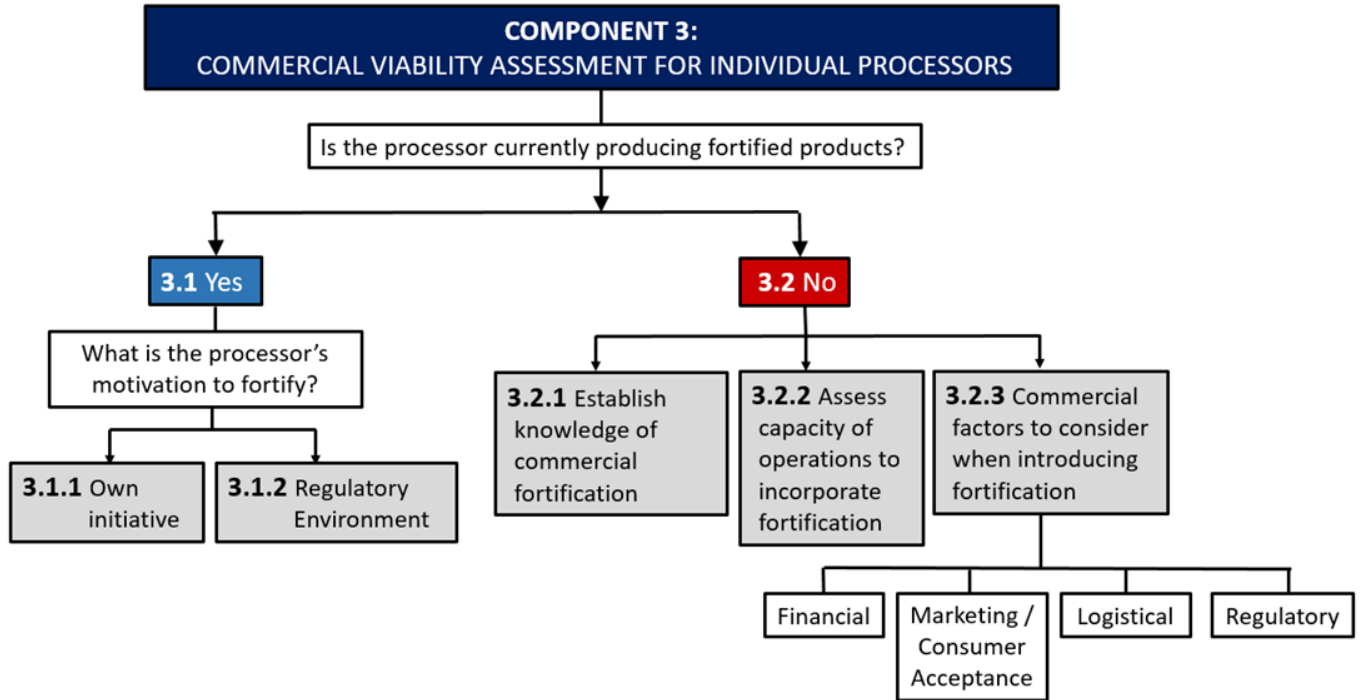
DATA TO COLLECT

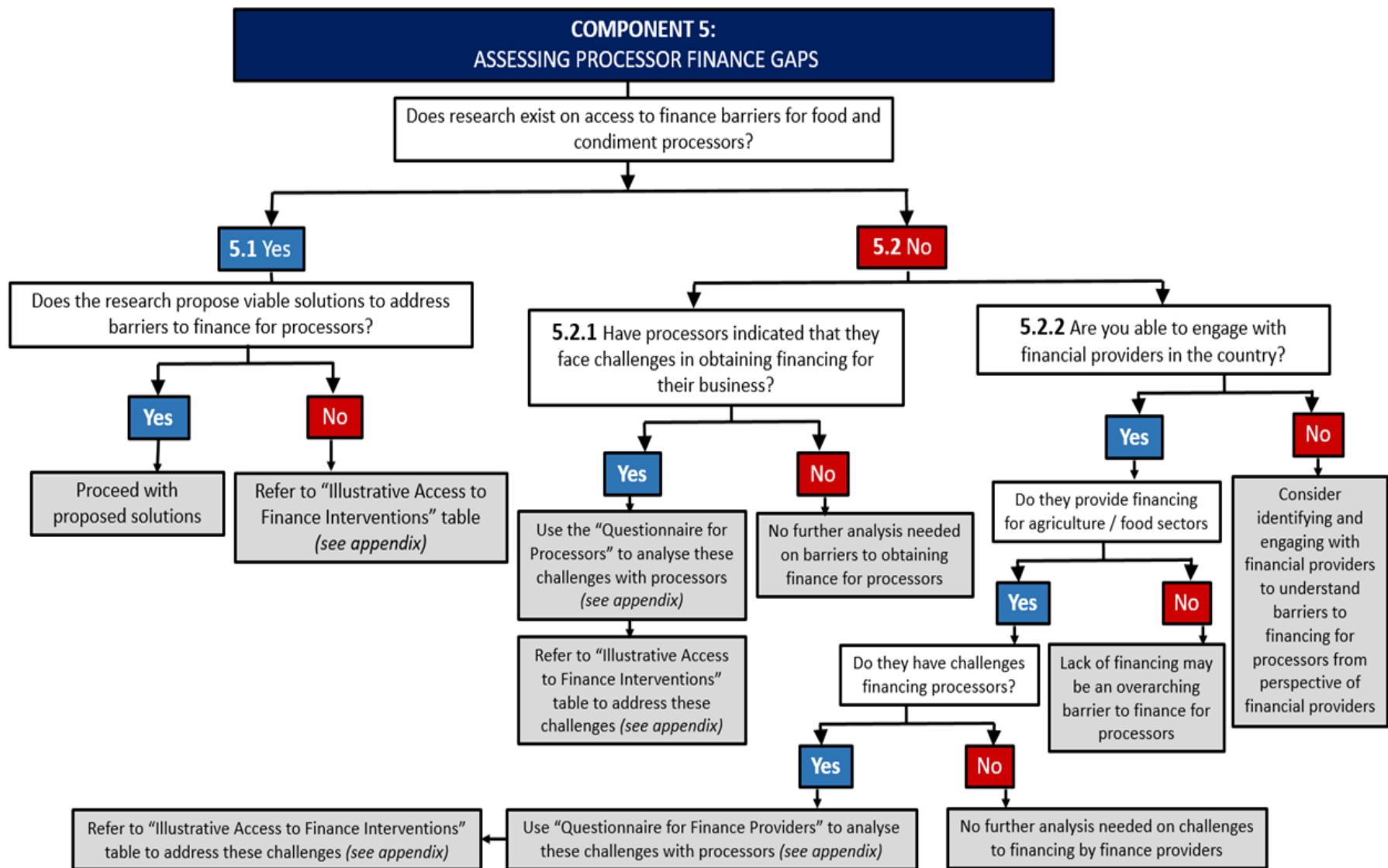
		Is this data available?	What are the findings?	What is the source(s)?	Is the quality of the data sufficient?	IF quality data is not available: How can an acceptable estimate be obtained?
2.1	Micronutrient(s) to be added					
	Required dosage per 100 grams of product as sold					
	Effect on appearance / organoleptic characteristics at required dosage					
	Stability of micronutrient in vehicle					
2.2	Current fortification regulation for the vehicle in target country (mandatory/voluntary/none)					
	What are processors' experiences / learnings from fortifying the vehicle in target country? (if applicable)					
	Countries with similar context where vehicle is mandatorily fortified (if applicable)					

	What learnings from these other countries are relevant for this project? (if applicable)					
2.3	Can the desired micronutrients be incorporated via a premix?					
	<i>If <u>only 1</u> micronutrient is to be added</i>	Based on the dosage, can good homogeneity be achieved through usual mixing processes?				
		Can the micronutrient be added via a diluted premix using a carrier?				
	<i>If <u>multiple</u> micronutrients are to be added</i>	Is it desirable for the micronutrients to be added into the vehicle individually?				
		Are suitable premixes available locally?				
		Is there regulatory control over premix suppliers?				
	Can the desired micronutrients be incorporated in both solid and liquid vehicles?					
	Can intake of the desired micronutrients by the target population be improved by use of the vehicle as an ingredient? Are the proposed dosages in the food vehicle able to achieve this?					

Processor-Level Analysis

The following data can be gathered through interviews with processors and finance providers using the stakeholder interview guides in [Tool 4](#).





Illustrative Access to Finance Interventions

Conduct desk research to identify if any of the interventions below exist in the country context to partner with, build off of, or enhance. For the financial instrument interventions, it is recommended to consult the regional DFC offices and team to assess if the instruments can be applied to address access to finance barriers in the country. If the below interventions are not present in the country, it is recommended to consider undertaking a design and feasibility analysis to explore further options.

Table 5. Types of Access to Finance Interventions

Illustrative Access to Finance Interventions	Description	Access to Finance Challenge(s) Addressed	Examples
Partnerships			
Technical Assistance (TA) and Business Development	TA and business development provide business consultancy, support, and development to organizations, which help improve bankability.	Addresses the gap in technical knowledge to implement fortification and incorporate fortification into business models.	AINFP, African Agriculture Fund TA facility
Investment Facilitation and Intermediation	Assisting food processors with becoming financeable, growing their investor pipeline, forging links, etc.	Addresses the issue of bankability for food processors.	AINFP access to finance component
Impact Investors	Partner with existing impact investors who aim to generate both positive environmental and social impact with financial returns. They can provide financing with greater flexibility at more attractive terms.	Addresses challenges of unfavorable financing terms from traditional commercial finance providers. De-risked private and commercial financing can catalyze more financing into processors.	Impact Investors include members of the Council for Smallholder Farmers Funds include Nutritious Foods Financing Facility, ABC Fund
Partnerships with multi-national companies (MNCs)	Development of partnerships between food processors and MNCs (key manufacturers and	Addresses the quality and reliability of fortification and premixes for processors and can provide processors with technical support,	Strategic Alliance for the Fortification of Oil and Other Staple Foods

Illustrative Access to Finance Interventions	Description	Access to Finance Challenge(s) Addressed	Examples
	suppliers of premixes and fortification equipment).	technology, and training to monitor fortification.	
Public-Private Collaboration for Demand Creation	Demand creation by institutional buyers (i.e., governments or non-governmental organizations (NGOs)) for fortified foods with advance purchase commitments.	Addresses the affordability of fortified foods by base of the pyramid population and secures volumes of fortified foods purchases for processors.	National food social safety net programs—rice fortification in India between government, private sector, civil society organizations, and World Food Programme (WFP)
Subsidies	Subsidy mechanisms incentivize the private sector to initiate fortification and signal the incorporation of fortification costs into business models.	Addresses 1) starting up and adoption of fortification, 2) overcoming scaling and investment challenges, 3) market failures to respond to societal nutrition needs.	International NGO grant programs, government subsidies
Financial Instruments			
Risk-Sharing	Impact-focused/high-risk investors absorb a disproportionate share of capital losses on an investment.	Addresses hesitation of financial institutions to lend to food processors. Mitigates investment risks for financial institutions to facilitate lending.	PASS Trust credit guarantee, African Guarantee Fund, Nigeria Incentive Based Risk Sharing System for Agricultural Lending
Pay for Performance	Payments made by funders to food processors are contingent on achievement of pre-agreed outcomes. Food processors can receive financing, but only if they fortify their products.	Addresses bankability by reducing risk profile and lowering interest rates. Focuses on impact results and aligns incentives.	Financing Ghanaian Agriculture Project, Aceli Africa, development impact bonds, performance-based grants

Illustrative Access to Finance Interventions	Description	Access to Finance Challenge(s) Addressed	Examples
<p>Facility Dedicated to Nutritious Food Value Chain</p>	<p>Facilities that combine nutrition business case challenges with financing challenges.</p> <p>Platform that combines premix and equipment aggregation with a credit facility.</p>	<p>Addresses both the business case and access to finance challenges simultaneously for processors to ease their fortification processes.</p>	<p>GAIN Premix Fund</p>
<p>Customized Financial Products</p>	<p>Financial institutions can customize existing traditional financial products in the market to meet specific food processor and fortification needs.</p>	<p>Addresses the unique financing challenges of food processors in their normal operations and fortification.</p>	<p>Supply chain finance, inventory/working capital finance, and asset/lease finance</p>

Enabling Environment Analysis

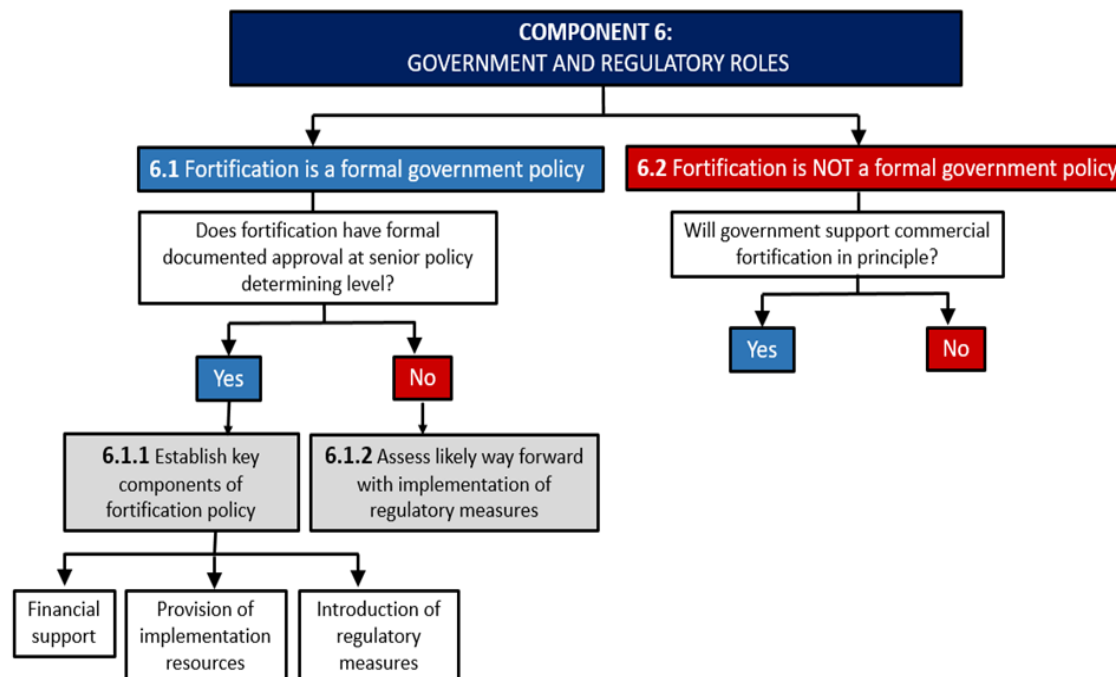


Table 6. Component 6 Questions

6.1: Fortification <u>is</u> a formal government policy		
Is there formal documented approval at the senior policy determining level?		
YES		
Which stakeholders have been involved in the preparation of the policy?		
Does the policy seem to differ significantly from policies adopted in other countries?		
Are further consultative steps proposed before potential legislation is implemented?		
Are there potential big-picture developments (political, other) in the country that might influence fortification policy in the near/medium term?		
Financial Support	Does the policy include financial support to processors of fortified foods?	
	Does the policy include financial support from government during initial implementation or an open-ended commitment i.e., subsidization of fortification materials?	

	Does the policy include government support for public health education on fortification?	
Provision of Resources for Implementing	Does the policy include provision of government resources for implementing fortification?	
	Does the policy include plans for a public awareness campaign for fortification?	
	Does the policy include plans to engage civil society bodies in a public awareness campaign?	
	Is there a dedicated government-led implementation team? Who's represented on it?	
	What resources will government make available to industry for commercial and technical issues?	
Introduction of Regulatory Measures	Does the policy contain formal regulatory requirements? For which foods?	
	Would the regulations require use of fortified versions of the vehicles when they are used as ingredients in other foods?	
	To what extent do the proposed regulatory measures align with regulations in other countries?	
	Which government bodies will administer and enforce the regulations?	
	What level of technical capacity exists in these government bodies?	
	Is there a government laboratory with capacity to perform the necessary micronutrient analysis?	
	What combination of procedures is proposed for enforcement (i.e., lab sample analysis vs. monitoring micronutrient addition)?	
NO		
	At what stage of preparation is a formal government policy/strategy on fortification?	
	What consultation has there been with potential local stakeholders as part of policy formation?	
	Has there been discussion with international bodies about assistance with policy formulation?	
	What are the likely components of the potential fortification policy?	
6.2: Fortification is <u>not</u> a formal government policy		
	Will government support commercial fortification in principle?	
YES		
	Is there a stated reason why fortification is not viewed as formal government health policy?	
	What is the likelihood of fortification becoming government policy at a later time?	
	Do government representatives want to participate in commercial discussions/planning re: fortification?	
	Is a form of regulatory control over fortification envisaged?	
NO		
	Has government provided reasons for <i>not</i> supporting fortification activities in the country?	
	Will government allow commercial fortification activities?	
	Is a form of regulatory control over fortification envisaged?	

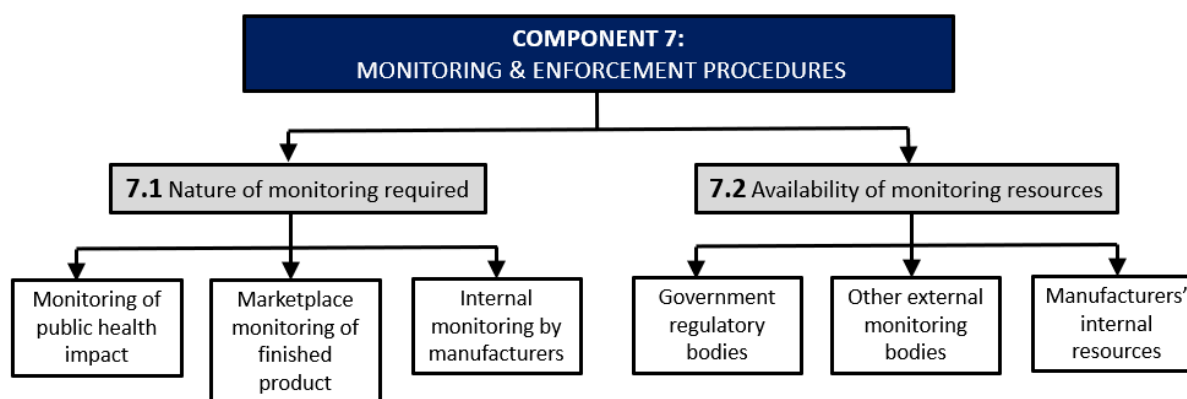


Table 7. Component 7 Questions

7.1: Nature of monitoring required		
Monitoring of Public Health Impact	Is baseline information available for the nutritional deficiencies that the fortification program is intended to address?	
	Does the proposed fortification strategy include a government-led or other formal survey to be conducted after a suitable period to assess the impact of the fortification program on the incidence of micronutrient deficiencies that it is intended to address?	
	To what extent will global best practices be part of public health impact monitoring?	
Marketplace Monitoring	What type of monitoring is planned to establish the degree of compliance with fortification requirements by-products routinely sampled from the retail trade?	
	Will the monitoring process include samples from all levels of retail, including informal trade?	
	Will the monitoring process enable an estimate of average changes in per capita intake of the target micronutrients to be made?	
Internal Monitoring by Processors	Will proposed regulations be in a format that can be readily interpreted and applied by manufacturers for routine quality management purposes?	
	Does the proposed fortification strategy include training for manufacturers on any new quality management procedures that will be required?	
7.2: Availability of monitoring resources		
Government Regulatory Bodies	Is fortification of the target vehicle going to be mandatory?	
	If so, what form will the regulations take?	
	What process is being followed to prepare the regulations?	
	What consultation has taken place with impacted stakeholders?	
	Do the regulations include references to global best practices and Codex requirements?	
	Which government/other bodies would act as formal enforcement agents?	
	To what extent will enforcement procedures be based on laboratory analysis of individual product samples?	

	Does fortification planning include provision for an increase in resources for regulatory monitoring of fortified products?	
Non-Government External Monitoring Bodies	Is the use of non-government bodies to conduct formal monitoring and enforcement procedures under consideration?	
	If so, in what manner would this be conducted?	
	Do these non-government bodies have a sufficient level of local resources to effectively conduct monitoring activities?	
Processors' Internal Resources	To what extent will fortification regulations prescribe specific internal monitoring procedures for manufacturers?	
	How will monitoring results from different manufacturers be correlated for the purpose of assessing the overall degree of compliance and effectiveness of fortification introduction?	

Table 8. Summary Analysis

	COMPONENT 1: NATURE OF MARKET	COMPONENT 2: TECHNICAL FEASIBILITY	COMPONENT 3: COMMERICAL VIABILITY FOR PROCESSORS	COMPONENT 4: TECHNICAL VIABILITY FOR PROCESSORS	COMPONENT 5: PROCESSOR ACCESS TO FINANCE	COMPONENT 6: GOVERNMENT & REGULATORY ROLES	COMPONENT 7: MONITORING & ENFORCEMENT PROCEDURES
What are the key findings from each component?							
Is the information required for each component sufficiently complete?							
Are there outstanding items that need to be resolved for the project to progress? Explain.							
Are there outstanding items to be resolved outside the areas of responsibility of the project team? Explain.							
Summary Guidance for Principal Stakeholder <i>Reference IR2 Activities</i>							

TOOL 4: STAKEHOLDER INTERVIEW GUIDES

Description & Objective

Tool 4 consists of technical questionnaires to be used for primary data collection during the assessment. The objective of the tool is to guide data collection from key stakeholders that comprise the LSFF ecosystem. There are six questionnaires, one for each of the following stakeholder groups/combination of stakeholder groups: 1) food processors and food vehicle importers, 2) finance providers, 3) retailers, 4) premix suppliers, 5) standards/policy/regulation/enforcement agencies and international institutions, 6) industry associations and professional associations.

How to Use

The implementing partner can use Tool 4 to plan and facilitate interviews with key stakeholders.

How Tool 4 Interacts with the Other Tools

Tool 4 helps to gather the key data points needed to complete the output template in [Tool 1](#) (LSFF Market Assessment Insights). [Tool 5](#) (Case Examples) provides samples of completed output templates for reference. [Tool 2](#) (Guidance to Manage and Conduct an LSFF Market Assessment) provides practical guidance to prepare for and conduct the stakeholder interviews.

Questionnaire I: Food Processors and Food Vehicle Importers

SECTION A: INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

Food(s)/condiment(s) processed/ imported by institution (tick as appropriate)

Salt		Maize Meal	
Sugar		Rice	
Edible Oil		Bouillon Cubes	
Wheat Flour		Other (specify): xxxxxx	

SECTION B. PROCESSOR-LEVEL ANALYSIS [use table below to record responses]

1. For how long have you been producing/importing (insert vehicle)?
2. What is/are your brand(s) of (insert vehicle)?
3. Are products manufactured in their own local manufacturing facility, or are some outsourced or imported?
4. (If own local manufacturing facility) What is your total installed manufacturing capacity for (insert vehicle)?
5. (If imported/outsourced) Where do you outsource/import your product?
6. What total volume of (insert vehicle) did you manufacture/ import in the last year?
7. What challenges (if any) are you experiencing in your production/importation of (insert vehicle)?
8. Are you currently fortifying (insert vehicle) or other products?

IF YES to #8, GO TO SECTION B.1: QUESTIONS FOR COMPANIES PROCESSING FORTIFIED FOODS

IF NO to #8, GO TO SECTION B.2: QUESTIONS FOR COMPANIES PROCESSING UNFORTIFIED FOODS

Responses to Questions from Section B

Food/ Condiment	Brand Name	Brand Description	Manufactured Locally or Outsourced / Imported? (if outsourced imported, from where?)	Installed Manufacturing Capacity (note if daily, monthly, annually)	Volume Manufactured in the Last Year	Fortified? (Yes / No)	Micro- nutrient(s) Added	Fortification costs as % of PRICE					Fortification costs as % of PROFIT MARGIN						
								0-5	5- 10	10- 20	20- 50	>50	0- 5	5- 10	10- 20	20- 50	>50		

SECTION B.I. QUESTIONS FOR COMPANIES PROCESSING FORTIFIED FOODS

1. Which of your products/brands are fortified?
2. *If imported/outsourced*, do you procure product that is already fortified or do you fortify it yourself?
3. What micronutrient(s) do you add to the (insert vehicle)?
4. Are suitable fortificants or premixes containing these micronutrient(s) readily available?
5. Why do you fortify? (regulatory requirement or a company initiative)

(If fortification of the vehicle is a REGULATORY REQUIREMENT)

1. Was any form of support (technical/financial/other) made available to you to assist with introducing fortification?
2. What have been the benefits and challenges of fortification for your business?
3. Would you consider introducing other fortified products, even if it is not compulsory?

(If fortification of the vehicle is a COMPANY INITIATIVE)

1. What have been the benefits and challenges of fortification for your business?
 - Has the introduction of fortified products benefitted your business financially, in spite of any added costs?
2. Do you intend to expand your range of fortified products?

CONTINUE FOR FORTIFIED FOODS (REGULATORY REQUIREMENT OR COMPANY INITIATIVE)

1. For each of your fortified products, what percentage of the **price** and **profit margin** do fortification costs comprise?
If the processor does not specify, ask what range it is in and tick the correct box: 0-5%, 5-10%, 10-20%, 20-50%, >50%

I. Rank your top three fortification costs, with (1) being the biggest cost:

Rank	Fortification Costs
	Fortificant inputs (i.e., premix and micronutrients)
	Equipment for fortifying (dosifier, blending equipment, measuring equipment)
	Equipment for quality control, quality assessment, and testing
	Additional staff or training for fortification management, monitoring, QA/QC, and accounting (i.e., salaries and wages)
	Marketing costs and building consumer awareness
	Additional tariffs from purchasing imported fortification inputs and equipment
	Foreign exchange costs from purchasing imported fortification inputs and equipment
	Other (<i>please detail</i>)

2. How do you cover your fortification costs? (**select 1**)

- a) Pass down the costs through higher prices to customers
- b) Obtained external financing
- c) Mix of passing down the costs through prices to customers and using external financing
- d) Other (please explain) _____

3. **If answer is (b) or (c)** What type of external financing have you obtained to cover fortification costs? (**select all that apply**)

- e) Government subsidies
- f) Grants

Debt:

- g) Bank Loans
- h) Guarantees
- i) Subsidized loans / concessional financing
- j) Asset and lease financing (i.e., equipment financing)
- k) Working capital facilities / supply chain finance
- l) Trade credit (i.e., extending payables dates with suppliers)
- m) Factoring / Invoice discounting
- n) Debt securities (i.e., bonds)
- o) Bank overdraft or credit line
- p) Other (please detail) _____

Equity:

- q) Additional capital contributions from owners / founders
- r) External equity injection
- s) Other (please detail) _____

[Move to Section C. Enabling Environment]

SECTION B.2. QUESTIONS FOR COMPANIES PROCESSING UNFORTIFIED FOODS

1. What prevents you from fortifying your products? **(Tick all that apply)**
 - a) Lack of customer demand / market for fortified products
 - b) Logistically complicated to implement
 - c) Unable to cover fortification costs**
 - d) No perceived benefits of fortifying products
 - e) Fortification is not mandatory
 - f) Fortification is mandatory, but not enforced
 - g) We are not aware that our food product can be fortified
 - h) Other (please detail) _____

If you selected (c) “unable to cover fortification costs,” continue with question 2 below.

If not, go to SECTION B.2.1: TECHNICAL VIABILITY

2. Which fortification costs are you unable to cover? (select all that apply)
 - a) Fortificant inputs (i.e., premix and micronutrient costs)
 - b) Equipment for fortifying (dosifier, blending equipment, measuring equipment)
 - c) Equipment for fortifying (dosifier, blending equipment, measuring equipment)
 - d) Additional staff or training for fortification management, monitoring, QA/QC, accounting (i.e., salaries and wages)
 - e) Marketing costs and business development
 - f) Additional tariffs from purchasing imported fortification inputs and equipment
 - g) Foreign exchange costs from purchasing imported fortification inputs and equipment
 - h) Other (please explain) _____

3. Why are you unable to cover these costs? **(select all that apply)**
 - a) Customers unwilling to pay for higher prices
 - b) External finance unavailable to finance fortification costs
 - c) Other (please detail) _____

4. Have you tried to obtain external financing for these costs? **(select 1)**
 - d) No, and I don't want to
 - e) No, but I would be interested
 - f) Yes, I have tried but wasn't able to
 - g) Other (please detail) _____

SECTION B.2.1 TECHNICAL VIABILITY

1. Are you familiar with fortification principles?
2. Have you looked into the commercial and technical requirements for fortification and the related resource requirements?
3. Do you have the following fortification equipment, and is it functional?

Fortification Equipment / Resources	Does the firm have it? Describe. <i>With permission, take a photograph of the equipment where appropriate</i>	Functional? (Yes / No)
Measuring equipment		
Production personnel with experience in fortification processes		
Proposed mixing procedure (batch / continuous)		
If Continuous: What dosifying equipment would be used? (type and capacity)		
If Batch: What mixing/blending equipment would be used? (type and capacity)		

4. On a scale of 1–5 (5 = very likely), how likely would you be to introduce fortification if there was guidance/support, even without a mandate?
5. What additional types of resources would you need to introduce fortification? **(select all that apply)**
 - a) Technical guidance on fortification (modifying the process flows to accommodate fortification; Identifying best point for fortification in their process; choosing micro-dosifier, mixer, etc.)
 - b) Procurement/storage (defining procurement processes; storage capacity, etc.)
 - c) Staffing/Training (hiring/training equipped production personnel in fortification)
 - d) Quality Assurance Systems (good manufacturing practices (GMPs), good hygiene practices (GHPs) and related practices, certification for ISO 9001 Quality Management System, ISO 22000, getting access to labs/ testing facilities)

- e) Traceability (setting up batch numbering system with date of manufacturing; utilize traceability labels)
 - f) Operational efficiency (inventory management, employee health and safety, environmental safeguards)
 - g) Financial (strengthening financial records and controls; getting access to finance)
 - h) Packaging (ensuring packaging is adequate to maintain integrity of fortified products in the market)
 - i) Logistics and distribution (getting access to logistics and distribution systems that retain quality of product/fortificants)
6. Might fortifying a product potentially require changes to your packing procedures?
7. Would introducing more sophisticated packaging cause technical concerns or a need for new equipment?
[If the respondent is unable to make that judgment, collect samples or take pictures of the current packaging]
8. Do you have suitable storage facilities for fortificants, considering their potential sensitivity to heat, light, and moisture?
[If the respondent is unable to make that judgment, collect samples or take pictures of the current packaging]
Do you have laboratory facilities with the capacity to analyze levels of addition for individual micronutrients? **If NOT**, is there a local contract laboratory that could potentially conduct the testing?
10. What is included in your current quality and food safety system?
- a) What would need to be added or updated to meet requirements for monitoring fortification addition?
 - b) Would you require guidance/support to make these additions or updates?

	Current status	Needs to be added/updated for fortification	Require guidance /support
Quality control manual			
Food safety manual			
Laboratory manual (sampling and testing methods)			
Sampling at specified points in the process line and laboratory testing			
Record keeping of :			
• Lab results			
• Non-conformities			
• Corrective actions			
ISO9001 certification/quality management system manual			
ISO22000 certification/FSMS manual			
GFSI certification/GFSI manual			
HACCP certification/HACCP manuals			
GMP/GMP manual			
Two-stage (or more) premix mixing system			
Reconciliation of quantity of premix delivered/received, premix used, and fortified product produced			
Sampling & testing frequency for fortificant in fortified products to verify the efficiency and effectiveness of the fortification process			
Calibration of dosifiers, weighing equipment & other measuring equipment			
Traceability in place for:			
• Raw material intake			
• In-process			
• Product dispatch			

11. What are the skills/experience of your staff related to fortification? (factory operators, supervisors, maintenance, quality control)

Department	# Staff	Qualifications Related to Fortification	# Staff with Experience in:		
			Dosifier Installation	Dosifier, Blender/Mixer Operation	Dosifier Calibration
Administration					
Production and maintenance					
Quality assurance/control					

12. What external bodies could you potentially leverage to help you implement fortification? (i.e. industry associations, international fortification support bodies)

FINANCIAL:

13. Do you believe you could adjust your pricing to accommodate fortification costs?
14. Would introducing fortification impact your working capital, cash flow, or other financial requirements?
15. Do you believe introducing fortified products could financially benefit your business, in spite of any added costs?
16. On a scale of 1–5 (1 = **not** likely, 5 = **highly** likely), would better access to finance for fortification incentivize your company to fortify?

MARKETING/CONSUMER ACCEPTANCE:

17. How likely do you think local consumers are to accept fortified products?
18. Do you believe it is necessary to undertake marketing activities to raise **consumer** awareness of fortification?
19. Do you believe it is necessary to undertake marketing activities to raise **retailer** awareness of fortification?

LOGISTICS

20. Do you anticipate any difficulties obtaining fortification materials? (premix/fortificants)

SECTION C. ENABLING ENVIRONMENT

- I. In your opinion, what are your company's **top 3** needs related to fortification for which you would require support from government or the international community?
 - a) Initial marketing of fortified products
 - b) Public health education on fortification
 - c) Financial support

- d) Advisory services to improve access to / address gaps in financing
- e) Development, deployment, and scaling-up of tools and brand / marketing indices to improve QC and compliance with fortification standards
- f) Other please specify _____

SECTION C.I ACCESS TO FINANCE

2. Have you received a loan in the last 12 months? (Yes/No/Not applied/Awaiting/Other). Please describe.
3. What are your **top 3** challenges when it comes to accessing finance for fortification costs? (**select 3**)
 - a) Formal finance is unavailable (i.e., banks)
 - b) Unaware of financiers/funds that would be open to financing a similar business
 - c) Unaware of requirements of financiers to finance a similar business
 - d) Limited long-term and high-volume asset heavy financing
 - e) Available loan sizes are too big
 - f) Available loan sizes are too small
 - g) Tenure of loans is too short
 - h) Interest rates are too high
 - i) Repayment terms are too strict
 - j) Loans are dollar denominated
 - k) Business lacks sufficient credit history
 - l) Business lacks sufficient fixed collateral
 - m) Decision timeline for external financing is too long
 - n) Insufficient information available about financial products
 - o) Difficulty selecting suitable financial products
 - p) Business is not interested in selling shares to an external investor to raise funding
 - q) Investors seek too high an ownership share when raising external funding
 - r) Company financial management and reporting yet to become finance ready
 - s) Other (please detail) _____
4. Are you interested in receiving advisory services to address access to finance challenges?
5. What were your domestic revenues in the last fiscal year?

Questionnaire 2: Finance Providers

The purpose of this interview guide is to better understand the supply of financial products and services to food processors and the constraints to providing these products and services to food processors. Intended respondents are financial institutions, banks, and other capital providers. If/when possible, it is ideal (though not required) for the interviewer to be familiar with financial services.

A. INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

B. FINANCING DETAILS

1. What can your organization be described as?
 - a) Commercial bank
 - b) Microfinance institution (MFI)
 - c) Private equity fund
 - d) Venture capital fund
 - e) Foundation/philanthropic/NGO
 - f) Impact investment fund
 - g) Savings and Credit Cooperative Societies
 - h) Development financial institution (DFI) or multilateral financial institution
 - i) Non-banking financial institution (asset finance company, leasing company, supply chain, specialize)
 - j) Other (please detail): _____
2. Do you provide financial products and services to companies involved in food processing?
 - a) Yes
 - b) No

If YES,

- For which of the following food products? (**Tick all that apply**)
- Do you have a dedicated team that focuses on companies in the food processing industry?

Maize meal (mealie meal)	
Sugar	
Salt	
Edible oil	
Wheat flour	
Pasta/Noodles/Spaghetti/Macaroni	
Bouillon cubes	
Rice	
Other	

If NO,

- Why not?
- Did you provide products and services to food processing companies in the past and/or are open to it in the future?

3. What are the revenues of the companies that you provide financing for? (**Tick all that apply**) In USD or in the local currency if you provide financing in it.

- Less than \$10,000
- \$10,000–\$50,000
- \$50,000–\$100,000
- \$100,000–\$500,000
- \$500,000–\$1,000,000
- \$1,000,000–\$3,000,000
- \$3,000,000–\$15,000,000
- Above \$15,000,000

Please detail here if in the local currency: _____

4. What currencies do you provide financing in? _____

5. What types of financial products do you offer? (Tick all that apply)

- a) Grants
- b) Bank loans
- c) Project finance
- d) Guarantees
- e) Subsidized loans / concessional financing
- f) Asset and lease financing (i.e., equipment financing)
- g) Working capital facilities / supply chain finance
- h) Trade credit (i.e., extending payables dates with suppliers)
- i) Factoring / Invoice discounting
- j) Debt securities (i.e., bonds)
- k) Bank overdraft or credit line
- l) Convertible debt
- m) Quasi-equity
- n) Equity
- o) Other (please detail): _____

6. What is the range of annual interest rates that you charge?

7. What is the range of tenors that you provide for your financial instruments? (*tenor = the time period between the disbursement of the loan and the last equated monthly installment payment/installment*)

8. What are other key terms of the financial instruments that you provide? (i.e., collateral requirements)

9. What are your minimum, maximum, and average ticket sizes? (in USD/local currency/financing currency)
(ticket size = size of the loan)

Minimum: _____

Maximum: _____

Average: _____

10. What are common challenges you encounter when providing financing to companies in general? (not specific to food processors) (Tick all that apply)
- a) Poor record keeping
 - b) Lack of strategic planning, understanding of the market/industry, financial projections, and/or budgeting leading to uncertain growth prospects
 - c) Weak governance for business and management
 - d) Low entrepreneurial skillsets
 - e) Inadequate skills to assess agriculture loans
 - f) High levels of informality
 - g) Uncertain growth prospects of businesses and entrepreneurs
 - h) Other: _____
 - i) N/A

11. (If they provide financing for food processing companies) what are unique challenges to financing food processing companies?

12. How is your institution capitalized?

13. Do you have experience receiving external capital (i.e., the public sector, international donors) and managing targeted access to finance programs?

14. Does your company offer risk mitigation programs/partnerships, such as the following? (Tick all that apply)
- a) Risk sharing programs (i.e., guarantees)
 - b) Grant programs (i.e., philanthropic donor grants)
 - c) Other: _____
 - d) None

Please describe the risk mitigation programs/partnerships (if applicable):

15. Does your company use risk mitigation programs/partnerships, such as the following? (Tick all that apply)
- a) Risk sharing programs (i.e., guarantees)
 - b) Grant programs (i.e., philanthropic donor grants)
 - c) Other: _____
 - d) None

Please describe the risk mitigation programs/partnerships (if applicable):

16. If the company does NOT use risk-sharing programs, (option A, above), why not?

17) From your perspective, what are the challenges and opportunities of financing large-scale food fortification?

Questionnaire 3: Retailers

The purpose of this interview guide is to better understand consumer trends and market trends for the food vehicles under consideration for fortification programming. The intended respondents are retailers and distributors. *Note:* these interviews can be supplemented by store visits to capture shelf space data and brand availability.

A. INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

Retail type (international supermarket, local supermarket, local stall, *kantemba*, etc.) _____

Location within the district (shopping mall, suburb (low- or high-density area), etc.) _____

B. BRAND INFORMATION [use table below to record responses for this section]

1. Do you stock/sell the following food products? (insert the food vehicles being explored)
2. What brand(s) do you sell of each of these products?
3. Are any of these brands fortified?
 - If **YES**, why do you stock/sell fortified products?
 - If **NO**, why **don't** you stock/sell fortified products?
 - a) Price
 - b) Lack of availability
 - c) Lack of awareness
 - d) Storage requirements
 - e) Other: _____
 - f) What might increase your likelihood of stocking/selling fortified products? (i.e., more consumers requesting, more favorable pricing, marketing support, etc.)

4. What quantity of each brand do you sell per year (estimate)?
5. Are fortified products similarly priced to non-fortified products? If NOT, how much more/less expensive?
6. Which sell mor—fortified or unfortified products?
7. How has demand for fortified products changed over time?
8. Do you experience any particular challenges with fortified products? (i.e., storage, etc.)
9. Who are your key distributors?
10. Do manufacturers/distributors offer benefits for stocking fortified products?

Responses to Questions from Section B (enter the food vehicles being explored in column I)

Food Vehicle	Sell/stock? (Yes / No)	Brand(s)	Fortified? (Yes / No)	Why do/don't sell/stock fortified?	Fortificant (if applicable)	Processing Company	Processing Location (city / country)	Packaging Type	Packaging Size	Quantity Sold per Year (estimate)

C. BRAND DIVERSITY DATA

[For the interviewer] Request information on the brand diversity under retail from the retailer’s records, if it exists. *If the records do not exist,* conduct a brand diversity survey by taking photos of the packaging labels of products from the retail market and collect the data in the table below.

District	Retail Name / Outlet Type	Location within District	Food Vehicle	Product Type	Brand Name	Fortified ? (Yes/No)	Fortificant (if fortified)	Processing Company Name	Production Location (city / country)	Packaging Type	Packaging Size	Quantity Sold per Year (estimate)

Questionnaire 4: Premix Suppliers

A. INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

B. PREMIX SUPPLY & MARKET

1. For how long have you been supplying premix?
2. What type of premix do you supply – what fortificants are included?
3. What is your premix brand(s)?
4. Which manufacturers do you supply to? Which brands use your premix?
5. Do you manufacture premix in your own local manufacturing facility, or do you outsource and/or import it?
6. What challenges do you face in sourcing and supplying premix?
7. What volume of premix did you supply in the last year?
8. What is the premix pricing in the market?

Type of Premix	Fortificant(s) Added	Brand(s)	Manufacturers Supplied To	Brands Using Premix	Manufactured locally, outsourced, or imported?	Volume Supplied per Year	Average Price

[Additional questions to consider asking:]

- How many premix suppliers are there locally?
- Who are your biggest competitors in the market?
- What is your market share? (volume of premix supplied by company compared with total volume in the market)
- What is the estimated market share of your biggest competitors?
- Do processors express demand for new premix solutions, beyond those available?

C. ASSESSING PREMIX SUPPLIER FINANCE GAP

1. In your opinion, what are your company's **top 3** needs for which you would require support from government or the international community?
 - a. Initial marketing of fortified products
 - b. Public health education on fortification
 - c. Financial support
 - d. Advisory services to improve access to / address gaps in financing
 - e. Development, deployment, and scaling-up of tools and brand/marketing indices to improve quality control and compliance with fortification standards
 - f. Other: _____

2. Have you received a loan in the last 12 months? (Yes/No/Not applied/Awaiting/Other) Please describe.

3. What are your **top 3** challenges when it comes to accessing finance? (**select top 3**)
 - a) Formal finance is unavailable (i.e., banks)
 - b) Unaware of financiers/funds that would be open to financing a business like mine
 - c) Unaware of requirements of financiers to finance a business like mine
 - d) Limited long-term and high-volume asset heavy financing
 - e) Available loan sizes are too big
 - f) Available loan sizes are too small
 - g) Tenure of loans is too short
 - h) Interest rates are too high
 - i) Repayment terms are too strict
 - j) Loans are dollar denominated
 - k) My business lacks sufficient credit history
 - l) My business lacks sufficient fixed collateral
 - m) Decision timeline for external financing is too long
 - n) Insufficient information available about financial products
 - o) Difficulty selecting suitable financial products
 - p) My business is not interested in selling shares to an external investor to raise funding
 - q) Investors seek too high an ownership share when raising external funding
 - r) Company financial management and reporting yet to become finance ready
 - s) Other (please detail) _____

4. Are you interested in receiving advisory services to address access to finance challenges?
5. What were your domestic revenues in the last fiscal year? (USD)
 - a) < \$10,000
 - b) \$10,000–\$50,000
 - c) \$50,000–\$100,000
 - d) \$100,000–\$500,000
 - e) \$500,000–\$1,000,000
 - f) \$1,000,000–\$3,000,000
 - g) \$3,000,000–\$15,000,000
 - h) > \$ 5,000,000

If in the local currency, please detail here _____

Questionnaire 5: Standards/Regulation/Enforcement Agencies and International Institutions

A. INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

B. INTRODUCTION

1. Can you tell us about your institution and your mandate in relation to food fortification?

GOVERNMENT & REGULATORY ROLES

C.1: IF FORTIFICATION IS A FORMAL GOVERNMENT POLICY

C.1.1: If there is formal documented approval at the senior policy determining level

1. What policy, standards, and legislative documents outlining the details of food fortification in (insert country name) are available in the public domain? Which documents is your institution responsible for?
2. How comparable are these policy, standards, and legislative document(s) to those adopted in similar countries?
3. What stakeholders have been involved in preparing the policy, standards, and legislative documents that your institution is responsible for?
4. Are there potential political or other big-picture developments in the country that might influence fortification policy, standards and/or legislative document(s) in the near and medium terms?

Financial Support

5. Do the policy, standards, and legislative document(s) include potential financial support to manufacturers of fortified foods?
6. Is there any provision for government support or external NGO/multilateral support for public health education on fortification?
7. Is there a stated time period for government financial support from government during initial implementation, or an open-ended commitment, i.e., subsidization of fortification materials?

Provision of Implementation Resources

8. Is there provision of specific government resources for the implementation of fortification?
9. Is there a dedicated government-led team tasked with implementation? If so, who is represented on the team?
10. What resources does government make available to industry for commercial and technical issues re: fortification?
11. Have you or are there plans to conduct a public health awareness campaign for fortification?
12. Have you or are there plans to incorporate civil society bodies into a public awareness campaign? If so, which civil society bodies and why have they been selected?
13. In your opinion, what are your organization's top 3 technical need areas, for which you would require support from government or the international community?
 - a) External support to assist with initial marketing of fortified products
 - b) Financial support to manufacturers of fortified foods
 - c) Support for public health education on fortification
 - d) Support in testing and monitoring
 - e) Support for development, deployment, scaling-up of tools and brand/marketing indices to improve quality control and compliance with fortification standards
 - f) Advisory services to fortifying food companies to improve access to/address gaps in financing
 - g) Other: _____

Introduction of Regulatory Measures

14. Does the fortification policy, standards and/or legislative document(s) contain formal regulatory requirements? If so, to what foods do the regulations apply?
15. Would the regulations also require use of fortified versions of the vehicles when used as ingredients in other foods?
16. Which government bodies are responsible for administration and enforcement of the regulations?
17. What level of technical capacity exists in the government bodies concerned?
18. Is there an established government laboratory with the capacity to perform the necessary micronutrient analysis?
19. What combination of procedures is used for enforcement (i.e., lab sample analysis vs. monitoring micronutrient addition)?
20. Has there been an estimate of the likely cost of enforcement for both the enforcement bodies and industry?

Processors Capabilities

21. Do processors fortify in-line with industry standards?
22. Do processors have access to lab capabilities and adequate QA/QC systems to ensure fortification quality?
23. Do processors appear to be adhering to national quality and safety standards?

Challenges

24. What are the key challenges in fortification and monitoring? How do you know?
25. What is the estimated cost of enforcement for both the monitoring and enforcement bodies?

C.1.2: If there is NOT formal documented approval at the senior policy determining level

26. At what stage of preparation is a formal government policy / strategy on fortification?
27. What consultation with potential local stakeholders has taken place as part of policy, standards and/or legislative document(s) development/formation? Has there been any discussion with international bodies regarding potential assistance with policy, standards and/or legislative document(s) formulation?
28. What are the likely components of the potential fortification policy, standards and/or legislative document(s)?

C.2: IF FORTIFICATION IS NOT A FORMAL GOVERNMENT POLICY

- 1) Does government support commercial fortification in *principle*?

C.2.1: YES, government supports commercial fortification activities in principle

- 1) Is there a stated reason why fortification is not viewed as formal government health policy?
- 2) What is the likelihood of fortification becoming government policy in future?
- 3) Is a form of regulatory control over fortification envisaged?

C.2.2: NO, government does NOT support commercial fortification in principle

- 1) Has government provided reasons for not supporting fortification activities in the country?
- 2) Will government *allow* commercial fortification activities?
- 3) Is a form of regulatory control over fortification envisaged?

D. MONITORING PROCEDURES

D.1: Monitoring of Public Health Impact

1. Is baseline information available for the nutritional deficiencies that the fortification program intends to address?
2. Does the fortification strategy include a government-led or other formal survey to be conducted after a suitable period to assess the impact of the fortification program on the incidence of micronutrient deficiencies that it intends to address?
3. To what extent will global best practice be a part of any proposed public health impact monitoring?
4. What is the frequency of the following surveys, which institution is responsible for conducting each one, and after how much time are the results shared with processors?

Survey Type	Frequency	Institution Responsible	Timeframe for Sharing Results with Processors
Market sampling of fortified food vehicles			
Fortificant levels in the market			
HH survey for consumption of fortified foods			
Fortificant levels in blood or other biological markers			
Public importance of vitamin/mineral deficiencies			

D.2: Marketplace Monitoring

5. What type of monitoring is planned to establish the degree of compliance with fortification requirements by products routinely sampled from the retail trade?
6. Will the monitoring process include samples from all levels of retail including informal trade?
7. Will the monitoring process be designed to enable an estimate of average changes in per capita intake of the micronutrients concerned to be made?
8. What is the frequency of the following surveys, and which institution is responsible for conducting each one?

Survey Type	Frequency	Institution Responsible
Food vehicle purchases by households		
Market sampling of fortified food vehicles		
Fortificant levels in the market		
Calibration of dosifiers, weighting equipment, and other measuring equipment		

D.3: Internal Monitoring by Processors

9. Will proposed regulations be in a format that can be readily interpreted and applied by manufacturers for routine quality management purposes?
10. Does the proposed fortification strategy include training for manufacturers in new, required quality management procedures?

E. MONITORING RESOURCES

1. Is fortification of the designated food vehicles going to be mandatory?
2. If so, what form will the regulations controlling fortification take?
3. What process is being followed to prepare the regulations, and what consultation has taken place with impacted stakeholders?
 - a) Procedure for policy:
 - b) Procedure for preparation of the Act:
 - c) Procedure for preparation of the regulation of the Act:
 - d) Procedure for preparation of statutory instrument:
 - e) Mandatory and voluntary standards:
4. Have the regulations included references to global best practice and Codex requirements?
5. Which government or other bodies would act as formal enforcement agents?
6. To what extent will enforcement procedures be based on laboratory analysis of individual product samples?
7. Does fortification planning include provision for increase in resources required for regulatory monitoring of fortified products?

E.2: Non-governmental External Monitoring Bodies

8. Is use of NGO bodies to conduct formal monitoring and enforcement procedures under consideration?
9. If so, how would this be conducted?
10. Do the NGO bodies have sufficient local resources to effectively conduct monitoring activities?

E.3: Processors' Internal Resources

11. To what extent will fortification regulations prescribe specific internal monitoring procedures for manufacturers?
12. How will monitoring results from different manufacturers be aggregated to assess overall compliance and effectiveness of the fortification introduction?

F. SUMMARY OF INTERVIEWS

Food Vehicles <i>Fill in the target vehicles for the assessment</i>	Current Enforcement	Regulatory Evolutions / Outlook (Capacity to enforce standards, etc.)	Current Estimated Fortification Levels	Testing Protocol & Systems	Compulsory Use of Fortified Variants as Ingredients?
	<i>Mandatory, Voluntary or None</i>	<i>Current capacity to enforce standards; Expected regulatory evolutions (i.e., new standards)</i>	<i>Estimated fortification levels in the market</i>	<i>Availability of infrastructure to support testing & ensure enforcement of standards</i>	<i>Is there a current or expected mandate?</i>

Questionnaire 6: Industry Associations and Professional Associations

A. INSTITUTIONAL INFORMATION

Date of Interview: _____

Name/Code of Interviewer: _____

Name of Interviewee: _____

Position/Title of Interviewee: _____

Name of Firm: _____

Address of Firm: _____

Province & District: _____

B. INTRODUCTION

1. Please share with us a brief history of the association.
2. What food vehicles are managed by or relevant to the association?
3. What are the association's mandates related to food fortifications?

C. MARKET SIZE INFORMATION

1. How big is the domestic market for (insert food vehicle)?
2. How has this changed over the last ~10 years?
3. Approximately what percent of households consume it?
4. What percent of the domestic supply is processed locally (versus imported)?
5. How does the (insert food vehicle) industry define "large scale" or "industrial scale" processor? (i.e., >X metric tons (MT)/day)

We define industrial processor as a processor with significant market share; or industrial processes and the installed capacity, technical capacity and resources (i.e. staff, etc.) to produce quantities that would have significant market share

6. What is the segmentation of (insert food vehicle) processors?
 - a) Approximately how many large/medium/small processors are there?
 - b) What is the approximate market share of the large/medium/small processors?

Vehicle	Domestic Market Size	Trend in Last 10 Years	% HHs	% Domestic Supply Processed Locally	Volume for large/ industrial " scale	LARGE Processors		MEDIUM Processors		SMALL Processors	
						#	% Share of Market	#	% Share of Market	#	% Share of Market

1. Who are the large-scale processors?
 - a) What are their brands?
 - b) Are any of them fortified?
 - c) Approximately how many years have they been in operation?
 - d) What is their estimated processing capacity (volume)?

Vehicle	Large Processors	Estimated Processing Capacity	Years of Operation	Brands	Fortified? (Yes / No)

2. How is the end-use market segmented (i.e. formal vs. informal, urban vs. rural, large-scale vs. mid vs. small scale)?
3. How price sensitive are the consumers? Has consumer demand for fortified products changed?
4. What are the key challenges faced by processors in the industry?

D. GOVERNMENT, REGULATORY, & MONITORING ROLES

D.1: IF FORTIFICATION IS A FORMAL GOVERNMENT POLICY

D.1.1: If there is formal documented approval at the senior policy determining level

- 1) Are policy, standards and/or legislative document(s) outlining all details of food fortification available in the public domain? Which ones?
- 2) What stakeholders have been involved in preparing the policy, standards and/or legislative document(s)?
- 3) Are there potential political or other big-picture developments in the country that might influence fortification policy, standards and/or legislative document(s) in the near and medium terms?

FINANCIAL SUPPORT

- 4) Does the policy, standards and/or legislative document(s) include any form of potential financial support to manufacturers of fortified foods?
- 5) Does the policy, standards and/or legislative document(s) contain any form of government support for public health education on fortification?
- 6) Does the policy, standards and/or legislative document(s) include provision for potential financial support from external NGO or other bodies?
- 7) Is there a stated time period for government financial support during initial implementation, or form of open-ended commitment, i.e. subsidization of fortification materials?

INTRODUCTION OF REGULATORY MEASURES

- 8) Does the fortification policy, standards and/or legislative document(s) contain formal regulatory requirements?
 - To which foods do they apply?
- 9) Which government bodies are responsible for administration and enforcement of the regulations?
 - What level of technical capacity exists in the government bodies concerned?
- 10) What combination of procedures are used for enforcement (i.e. lab sample analysis vs. monitoring micronutrient addition)?

PROCESSOR CAPABILITY

- 11) Do processors fortify in-line with the industry standards?
- 12) Do target processors have access to laboratory capabilities and adequate QA/QC systems to ensure and monitor fortification quality of their products?

MONITORING

- 13) What type of monitoring is planned to establish the degree of compliance with any prescribed fortification requirements by products routinely sampled from the retail trade?
 - Will the monitoring process include samples from all levels of retail including informal trade?
- 14) Does the proposed fortification strategy include technical training for manufacturers in any new quality management procedures that will be required?
- 15) Is the use of certain non-government bodies to conduct formal monitoring and enforcement procedures under consideration?

CHALLENGES

- 16) What are some of the major challenges for (insert food vehicle) processors?
- 17) What are some of the major challenges related to fortification and monitoring? How do you know?

Additional Questions to Consider:

- Is there a dedicated government-led team tasked with implementation? If so, who is represented on the team?
- Are there plans for or has there already been a public health awareness campaign for fortification?
- Does the fortification policy, standards and/or legislative document(s) contain formal regulatory requirements that could require use of fortified versions of (insert food vehicle) when used as an ingredient in other foods?
- To what extent do the regulatory measures align with regulations in other countries?
- Is there an established government laboratory with the capacity to perform the necessary micronutrient analysis?
- Is reference baseline information available for the nutritional deficiencies that the fortification program is intended to address?
- Does the proposed fortification strategy include a suitable government-led or other formal survey to be conducted after a suitable period to assess the impact of their fortification program on the incidence of micronutrient deficiencies the program is intended to address?
- To what extent will global best practice be a part of any proposed public health impact monitoring?
- How long does it typically take for regulatory agencies to provide processors feedback on the results of fortification monitoring?
- Will the market monitoring process be designed to enable an estimate of average changes in per capita intake of the micronutrients concerned to be made?

D.1.2: If there is NO formal documented approval at the senior policy determining level

- 1) At what stage of preparation is a formal government policy / strategy on fortification?
- 2) What consultation with potential local stakeholders has taken place as part of policy, standards and/or legislative document(s) development/formation?
- 3) Has there been any discussion with international bodies regarding potential assistance with policy, standards and/or legislative document(s) formulation?
- 4) What are the likely components of the potential fortification policy, standards and/or legislative document(s)?

D.2: IF FORTIFICATION IS NOT A FORMAL GOVERNMENT POLICY

D.2.1: If government WILL support commercial fortification activities in principle

- 1) Is there a stated reason why fortification is not viewed as formal government health policy?
- 2) What is likelihood of fortification becoming government policy later?
- 3) Is a form of regulatory control over fortification envisaged?

D.2.2: If government will NOT support commercial fortification activities in principle

- 1) Has government given reasons for their unwillingness to accept fortification activities in the country concerned?
- 2) Will government **allow** commercial fortification activities?
- 3) Is a form of regulatory control over fortification envisaged?

TOOL 5: CASE EXAMPLES

Description & Objective

Tool 5 consists of the executive summaries of two sample outputs (PowerPoint decks) from piloting the assessment methodology in Zambia and Nigeria in 2022. These executive summaries informed the design of the output template in [Tool 1](#).

The objective of Tool 5 is to provide examples of how the methodology has been applied in different markets, including data visualization methods for reference.

How to Use

An implementing partner can use Tool 5 for reference when planning and conducting the assessment. Note that each assessment output will be context-specific, based on the unique opportunities identified through the research process.

How Tool 5 Interacts with the Other Tools

The sample outputs in Tool 5 can serve as reference material during the planning, research, and analysis phases of the assessment, alongside Tools 1–4.

Zambia LSFF Feasibility Assessment: Executive Summary



Zambia Large-Scale Food Fortification (LSFF) Opportunity Assessment

Opportunities to expand large-scale food fortification (LSFF) in Zambia in collaboration with the food industry

March 2023



Contents

1. Executive Summary
2. Background
3. Introduction to Food Vehicles (nature of the market)
4. Food Fortification Regulatory Environment
5. Supporting Markets:
 - Pre-mix supply
 - Access to Finance
 - Market Incentives
6. Industrial Food Processor Capabilities and Needs (by food vehicle)
 - Sugar
 - Wheat flour
 - Edible oil
 - Salt
 - Maize



Executive Summary



Objectives of the Assessment

Purpose: identify opportunities to expand LSFF in Zambia in collaboration with the industrial food industry.

Output: a market diagnostic of the industrial food industry sector for a subset of staple foods & condiments, that

- profiles & segments the sector and its dynamics;
- establishes capacities & constraints of key actors for LSFF opportunities;
- prioritizes staple foods/condiments for LSFF programming, and recommends strategies for overcoming key LSFF constraints for those foods/condiments

Data Sources: Literature Review + 40 Stakeholder Interviews

Key secondary sources

- FAOSTAT
- Zambia LCMS
- Indaba Agricultural Policy Research Institute
- FACT
- Global Fortification Data Exchange
- Food Fortification Initiative Toolbox
- Helen Keller International food-frequency method

Standards setting/enforcement (N=4)

Zambia Bureau of Standards
Competition and Consumer Protection Commission
Zambia Compulsory Standards Agency
Public Health Department – Lusaka City council

Policy/Embassies (N=3)

National Food & Nutrition Commission
Ministry of Health – Nutrition Unit
Embassy of Ireland – Development

Associations/Networks (N=4)

Civil Society Organisation – Scaling Up Nutrition
Consumer Unity & Trust Society
Millers Association of Zambia
Salt Association of Zambia

Banks (N=2)

ZANACO Bank
First Alliance Bank

Suppliers/Retailers (N=5)

Salt importers (3)
Retailers – Choppies (1)
DSM South Africa

Labs/ Testing/ Research (N=3)

National Food Laboratory
National Institute of Scientific & Industrial Research
Zambia Bureau of Standards Lab

Expert interviews

Food processors (N=19)

Maize meal & wheat flour
1. National Milling
2. African milling
3. Mpongwe/Atheneon Milling

Maize meal

1. Nyimba Millers
2. Superior Milling
3. Star Milling
4. Continental Milling
5. APG Milling
6. Chimanga Changa Milling
7. Bwino Milling
8. Jambo Milling

Wheat flour

1. Crown Milling

Edible Oil

1. Mount Meru Millers
2. Global Industries
3. Supa Oil
4. Kalomo Grains

Sugar

1. Zambia Sugar (Sugar)
2. Mansa Sugar (Sugar)

Other

1. Java Foods (Noodles)

Expert interviews



7 staple foods & condiments were explored for LSFF program potential in Zambia

✓ SUGAR

Mandatory fortification in Zambia; potential opportunities to boost compliance.
Explored in this assessment

✓ SALT

✓ MAIZE MEAL

Voluntary fortification standards in Zambia, but *not commonly fortified*.

Explored in this assessment

✓ WHEAT FLOUR

✓ EDIBLE OIL

Though no fortification mandate or standard in Zambia, consumed by a large % of HHs.
Explored in this assessment

✓ RICE

Though no fortification mandate or standard in Zambia, growing interest from the nutrition community regarding LSFF potential.
Explored in this assessment

✓ NOODLES / PASTA

(linked to wheat flour, the main ingredient)
Though a nascent market, significant recent growth in market demand.
Explored in this assessment

✗ BOUILLON CUBES

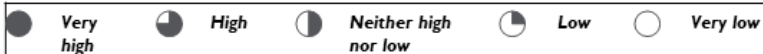
Though discussed with the Mission, no fortification standard in Zambia and a nascent market.
Not explored in this assessment



Of the 7 foods/condiments, 5 were shortlisted based on key market dynamics

	Sugar	Salt	Maize Flour	Wheat Flour	Edible Oil	Rice	Pasta/Noodles
% Households consuming	60%	>80%	>80%	45%	60%	20%	<20%
% Processed In-Country	99%	10%	100%	67%	33%	33%	75%
% Share industrial scale	90%	NA	40%	100%	70%	0%	100%
Daily food supply (kcal/capita/day)	115	NA	1089	64	186	23	0
Country food supply(000MT)	235	0	2818	119	161	56	0
Food supply growth %	2%	0%	1%	-1%	3%	-2%	60%
LSFF program feasibility	0%	0%	0%	0%	0%	0%	0%

Harvey ball interpretation:



Note: % Share industrial scale = share of in-country processing done by industrial / large-scale processors; Country food supply refers to maize and products; wheat and products, rice and products, etc.

Source: Fiedler, 2013; Sutton and Langmead, 2013; FAOSTAT, Food Balances



For each of the 5 VCs, the capabilities of industrial-scale processors were evaluated to determine capacity to drive LSFF

		Sugar	Salt	Maize meal	Wheat flour	Edible Oil
Share of large-scale food processors		●	NA (imports)	●	●	●
Existing level of fortification compliance		● 11% <small>At retail / HH level</small>	● 89%	NA	NA	NA
Interest in fortifying		NA	NA	●	●	●
Average Technical capability	Technical capacity	●		●	●	●
	Procurement / storage	●		●	●	●
	Staffing / Training	●		●	●	●
	Quality Assurance Systems	●		●	●	●
	Traceability	●		●	●	●
Average Commercial capability	Operational efficiency	●		●	●	●
	Financial capacity	●		●	●	●
	Packaging	●		●	●	●
	Logistics & Distribution	●		●	●	●
	Marketing & Consumer awareness	●		●	●	●
Average processor capacity to support LSFF:		●	●	●	●	●

Legend: ● Full capacity to support LSFF ● Moderate capacity ● Low capacity

Source: Primary interviews (N=40)

Summary of LSFF feasibility for each food vehicle

LSFF Program Feasibility
(High to Low)

	Salt	Sugar	Wheat flour	Edible oil	Maize meal
Consumption (% HH)	> 80%	60%	45%	60%	> 80%
LSFF Regulation	Mandatory	Mandatory	Voluntary	No standard	Voluntary
Estimated Compliance	89%	11% <u>at retail</u>	-	-	-
% Processed In-Country	10%	99%	67%	33%	100%
% Industrial Scale	N/A	90% (3-4 players)	100% (7-10 players)	~70% (8-12 players)	40% (~30 players)
LSFF Capabilities of Processors	Limited technical capacity of importers	Strong technical and commercial capacity	Modest. No FF experience. Broadly strong core commercial capacity. Concerned about lack of FF marketing experience	Modest. No FF experience. Broadly strong core commercial capacity	Modest. Some FF experience. Strong core commercial capacity among industrial processors, <i>weak for small millers</i>
Interest Among Processors	-	In theory, but low compliance highlights delivery problem	Leading processors see potential. <i>Consumer interest, not regulation, is barrier for them</i>	Processors' interest appears <i>contingent on mandatory regulation being introduced</i>	Moderate; require government support (regulation) and consumer demand/public awareness
Other Themes Surfaced in Research	Varied storage conditions may lead to loss of iodine; Improve compliance via brand indices	Low enforcement outside of Lusaka is a major gap; Financing & cost of LSFF not a principal barrier	Interest among largest players, but need support on consumer engagement; Core business struggling due to impact of Russian War in Ukraine; Access to finance could be better, <i>not critical constraint</i>	Concerns about price sensitivity. Desire to proceed would likely need regulation; Prior engagements with WFP, but did not materialise progress	Regulatory support; Consumer education / marketing support; QA/QC systems; Fortification project halted midstream in 2009

90% of domestic salt supply is imported with fortificants already added, and compliance is already high - ~89% per mandatory standards. Therefore, there is limited *additional opportunity* to drive impact.

Maize meal fortification is challenging. 60% is processed by small *hammer mills*, and the economics of mandatory fortification would be challenging for them. But, due to consumer price sensitivity, processors require mandatory standards to pursue fortification. Fortification would require significant support to millers.

LSFF strategies for higher-feasibility vehicles: sugar, wheat, oil

	Sugar	Wheat flour	Edible oil
Technical Strategy	Explore issue of low estimated compliance at retail. Strengthen processor & enforcement capabilities; Micronutrient Fortification Index to create positive incentives between brands	Support processors with efforts to drive brand differentiation via fortification, while supporting shifts in regulatory environment	Verify feasibility & stability of vitamin A in locally-produced oil; Support development of standards and a shift in the regulatory environment toward mandatory fortification
Support to Processors	1. Technical assistance (TA) to address fortification delivery challenges, resulting in low estimated compliance at retail	1. TA to introduce fortification line and build fortification into brand narrative 2. Support on commercial and sourcing adaptations in light of business impacts from Russian War in Ukraine and exchange rate volatility	1. TA to introduce fortification line, build fortification into brand narrative, improve packaging of small containers (UV-opaque), and ensure low peroxide levels 2. Support on commercial adaptations to mitigate high raw material costs and reduce fear/risk of pricing products out of market
Improvements to Enabling Environment	2. Investment in monitoring agencies, quality assurance/quality control (QA/QC) systems, labs outside Lusaka, and improving operational processes 3. Introduce brand/marketing indices to boost industry compliance	3. Investment in monitoring agencies, QA/QC systems, labs outside Lusaka, and improving operations 4. Consider aligning fortification standards of wheat flour with standards in South Africa so that trade reinforces policy	3. Explore policy opportunities to increase competitiveness of domestic product and to reduce prices of raw material 4. Collaborate with World Health Organization leading the process to develop normative guidance for an oil standard 5. Work with regional edible oil associations as they evaluate fortification of edible oil
Changes to Enabling Markets	4. Support shift in pre-mix economics: long-term pricing arrangements and stimulation of local premix production	5. Stimulate local production of premix to drive-down premix costs	6. Stimulate local production of premix to drive-down premix costs



Stakeholder capacities & constraints

Regulatory / Standards / Monitoring agencies

- Decentralized monitoring
- Fundamental regulatory infrastructure exists, but **lacks funding to ensure frequent sampling and adequate enforcement**

Industry / Market associations

- Industry associations such as MAZ, are **critical in creating the fortification agenda**
- Market associations such as SUN also **key to engaging CEOs and other leaders**

Finance providers

- **Value large-scale food processors** as key customers, with strong financial systems and ability to repay loans
- However **high interest rates**

Consumers / Civil society

- **Not aware of the benefits of fortification** in maize/wheat/edible oil; Consumers value fortified sugar based on Vit A marketing
- **Price sensitive & wary of some fortified products**

Food processors

- Large-scale processors have strong financial controls and operational processes. However, they **need investment in QA/QC systems & consumer education of fort. benefits**
- Small-scale processors would need more support

Premix suppliers

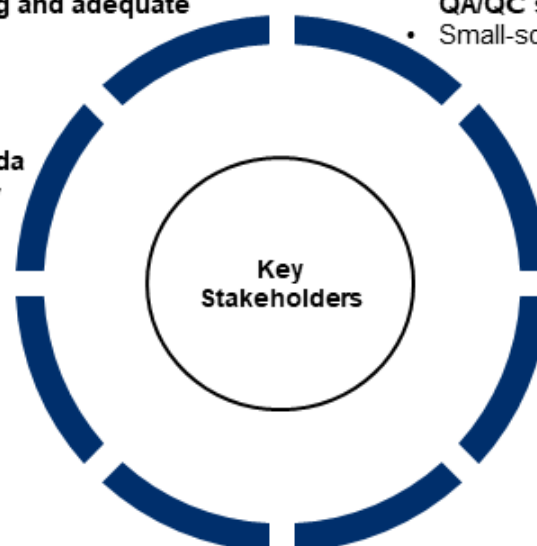
- **No domestic producers of premix**
- Primarily imported, and **subject to exchange rate fluctuations in price**

Suppliers / Importers of raw materials

- Raw material purchased in bulk causing **working capital constraints**
- Salt, edible oil and wheat also imported, making them subject to **exchange rate fluctuations in price**

Distributors / Retailers / Marketers

- **Logistics and storage facilities are a key challenge**; primarily rely on third party distribution companies
- Ready to stock fortified products, if consumers are interested



Source: Primary interviews (N=40)



Projected value-add of LSFF RF activities per vehicle (1 of 2)

USAID LSFF Results Framework, IR 2

Activity		Sugar	Salt	Maize	Wheat	Edible Oil
IR2.1: Food industry compliance with fortification standards through business development, food technology and quality control and marketing guidance strengthened						
Sub-IR 2.1.1	Food industry mapping/ scoping/ analyses					
Sub-IR 2.1.2	Help offset fort. costs through business/ operational / tech support/ marketing					
Sub-IR 2.1.3	Strengthen compliance with labeling standards, digital systems, etc.					
Sub-IR 2.1.4	Ensure premix availability, quality and traceability					
Sub-IR 2.1.5	Improve packaging of cooking oils and sugar		NA	NA	NA	
Sub-IR 2.1.6	Promote use of fortified ingredients in processed, blended foods					

Note: projected scope to add value on a scale of 1 -5, 1=low, 5=high:



= biggest opportunities to add value via LSFF programming



Projected value-add of LSFF RF activities per vehicle (2 of 2)

USAID LSFF Results Framework, IR 2

Activity		Sugar	Salt	Maize	Wheat	Edible Oil
Sub-IR 2.1.7	Support tools and brand/marketing indices to improve compliance	●	●	●	●	●
Sub-IR 2.1.8	Engage private sector to foster fortification alliances	◐	◐	◐	◐	●
IR2.2: Food industry compliance with fortification standards linked to improved access to finance and financing terms for general operations, as well as procurement of fortificants and food processing equipment						
Sub-IR 2.2.1	Conduct studies on fortification costs& effects on price and margins	◐	◐	◐	●	●
Sub-IR 2.2.2	Increase food fortification compliant industry's access to finance	◑	◑	◐	◐	◐
Sub-IR 2.2.3	Advisory services to improve access to finance	◑	◑	◐	◐	◐

Note: projected scope to add value on a scale of 1 -5, 1=low, 5=high:



= biggest opportunities to add value via LSFF programming

Biggest cross-cutting opportunities for LSFF programming

LSFF Results Framework Activities

IR 2.1.2 Help offset fort. costs through business, ops, tech support, marketing

Wheat flour, maize meal & edible oil processors seek support in consumer education & marketing to increase awareness of the benefits of fortified products, to drive demand. Consumers are price sensitive, buying non-fortified over fortified products due to the marginal additional cost & other factors, ie. concern about health impact of fortified maize. **For wheat flour, opportunity to support commercial & sourcing adaptations (whole of business approach)** in light of business impacts from war in Ukraine.

IR 2.1.3 Strengthen compliance with labeling standards, digital systems, etc.

There is an opportunity to strengthen compliance in sugar and – to a lesser degree – salt through investment in monitoring agencies, QA/QC systems, and laboratories outside Lusaka. For sugar, there is significant variation in compliance of fortificant level based on stage of sampling – factory vs. retail outlet. There is also limited access to laboratories outside of Lusaka.

IR 2.1.4 Ensure premix availability, quality, traceability

Need to ensure availability of premix at reasonable cost through long-term pricing arrangements and stimulating local production of premix. Premix is the highest-estimated incremental cost of fortification across food vehicles, and currently, there are no premix producers in Zambia.

IR 2.1.5 Improve packaging of cooking oils and sugar

Some sugar and edible oil is sold in transparent packages, that could lead to fortificant losses. Improving packaging of sugar from polythene-based to opaque paper-based packages and of edible oil from transparent containers to UV-opaque containers can prevent oxidation and decay of nutrients.

IR 2.1.7 Support tools & brand / marketing indices to improve compliance

Scope to study further the impact of introducing similar tools / indices in Zambia, particularly for sugar. While regulation is necessary, it does not seem enough to ensure compliance. Brand / marketing indices and other tools have been effective in other countries to ensure compliance within food industry.

IR 2.2.1 Conduct studies on effects of fort. cost on price and margins

Limited studies on food fortification costs other than sugar and maize; **Scope to add value through further studies on the capital and recurrent costs of staple food fortification and effects of costs on pricing and margin of profit, particularly in wheat flour and edible oils.**

Limitations of the study

1. **Publicly-available consumption data is dated.** Data from a more recent National Consumption Survey is expected in 2023.
2. **Consumption data is not based on a nation-wide survey;** it is based on region-specific data, which is then extrapolated to the whole country.
3. The assessment largely uses **qualitative data collection methods** versus quantitative methods.
4. The assessment used Harvey Balls to analyze and compare findings, as the qualitative data is otherwise challenging to compare across food industries.
5. **Samples in some industries are small** (i.e. fortification cost as % of price in sugar industry based on 2 samples, as the market is very consolidated). Small samples increase the risk of chance and increase the variance of the mean.



Nigeria LSFF Feasibility Assessment: Executive Summary



Nigeria Large-Scale Food Fortification (LSFF) Opportunity Assessment

Opportunities to expand large-scale food fortification (LSFF) in Nigeria in collaboration with the food industry

April 2023



Contents

1. Executive Summary
2. Background
3. Introduction to Food Vehicles (nature of the market)
4. Food Fortification Regulatory Environment
5. Supporting Markets
6. Industrial Food Processor Capabilities and Needs (by food vehicle)
 - Wheat flour
 - Edible oil
 - Rice
 - Sugar
 - Salt



Executive Summary



Objectives of the Assessment

Purpose: identify opportunities to expand LSFF in Nigeria in collaboration with the industrial food industry.

Output: a market diagnostic of the industrial food industry sector for a subset of staple foods & condiments, that:

- profiles & segments the sector and its dynamics ;
- establishes capacities & constraints of key actors for LSFF opportunities ;
- prioritizes staple foods/condiments for LSFF programming, and recommends strategies for overcoming key LSFF constraints for those foods/condiments

What motivated this study? (1 of 2)

The scale of micronutrient deficiency in Nigeria is severe

32% of children under 5 years are stunted

55% of non-pregnant women aged 15-49 are living with anemia

20% of children under 5 years are underweight

56% of pregnant women aged 15-49 are living with anemia

-\$1.5B yearly impact of vitamin & mineral deficiencies on Nigeria's GDP, driven by higher mortality and morbidity rates, and lower productivity

- Immediate causes of undernutrition include deficiencies in basic protein, energy, and micronutrients, ie. Vitamin A, Iron, Iodine, Zinc
- At least one 1/3 of anemias are attributed to iron deficiency
- Vitamin A deficiency occurs in 42% of children 6 – 59 months of age
- 21% of the population is estimated to be at risk of inadequate zinc intake based on food balance sheets and stunting prevalence.



Data sources: Joint Child Malnutrition Estimates, WHO Global Health Observatory; 2019 based on data from World Bank Data Bank sourced from WHO, Global Health Observatory Data Bank; Nigeria: Nutrition at a Glance, World Bank Publication, ref World Bank 2009. World Bank Development Indicators

What motivated this study? (2 of 2)

- Safely, sustainably reducing micronutrient inadequacies & improving diets in Nigeria
- LSFF is an *evidence-based, cost-effective* way to provide essential vitamins & minerals that are lacking in diets, particularly among the most vulnerable, *provided*:
 - ✓ the food vehicle is *widely & regularly consumed* by the target population
 - ✓ the food vehicle is *industrially processed*
 - ✓ LSFF programming is *appropriately designed & implemented*
- **Research Question:** What are the greatest opportunities to expand LSFF of staple foods & condiments in collaboration with the food industry, in line with the USAID LSFF Results Framework?



Data Sources: literature review + 17 stakeholder interviews

KEY SECONDARY SOURCES	STAKEHOLDER INTERVIEWS		
<p>FAO STAT Global Fortification Data Exchange (GFDx) Agricultural Market Information System (AMIS) Nigeria Nigeria Bureau of Statistics National Sugar Development Council USDA Foreign Agricultural Service OECD-FAO Agricultural Outlook World Bank WHO Global Health Observatory</p> <p>Reports:</p> <p>KPMG Wheat Based Consumer Foods in Nigeria TechnoServe Premix Study GAIN Sugar Report (2017, 2018, 2019) PWC Transforming Nigeria's Agricultural VC European American Journal: A Review of Smallholder Farming in Nigeria – Need for Transformation</p>	Associations / Networks (N=1)	<ul style="list-style-type: none"> Rice Processors Association (RIPAN) 	
	Banks (N=2)	<ul style="list-style-type: none"> Sterling Bank Plc. Stanbic IBTC Bank 	
	Premix Suppliers / Distributors (N=2)	<ul style="list-style-type: none"> Kingdomway Nutrients Ltd. BNSL Ltd. 	
	Food Processors (N=12)		
		Wheat Flour	<ul style="list-style-type: none"> Flour Mills of Nigeria
		Rice	<ul style="list-style-type: none"> Olam Agri Hillcrest Agro-Allied Industries Ltd. Mikap Nigeria Ltd. Labana Rice Mills Ben's Gold Rice Fursa Foods Ltd.
		Edible Oil	<ul style="list-style-type: none"> Rom Oil Mills Ltd. Nosak Group (Nosak Farm Produce) Yakassai Oil Mills Life Care Farm
		Bouillon Cubes	<ul style="list-style-type: none"> Nestle Nigeria Plc.



7 staple foods & condiments were explored for LSFF program potential in Nigeria

✓ SALT ✓ SUGAR ✓ MAIZE MEAL ✓ WHEAT FLOUR ✓ EDIBLE OIL

Mandatory fortification in Nigeria; potential opportunities to boost compliance.

✓ RICE

Though currently **no fortification mandate or standard** in Nigeria, rice is consumed by a very high % of HHs in large amounts *and* development of a standard is in-progress

✓ BOUILLON CUBES

Though currently **no fortification mandate or standard** in Nigeria; bouillon cubes are consumed by a very high % of HHs *and* there is increased interest in LSFF potential for bouillon due to growth in demand



The vehicles offer varying prospects for LSFF programming

Prospect for LSFF program impact = ■ High ■ Medium ■ Low

The National Food Consumption Survey commenced in 2020 and is still underway. Previous survey was published in 2003.

	Salt	Sugar	Maize Meal	Wheat Flour	Edible Oil	Rice	Bouillon
Status of Mandate	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Standard in-progress	No standard
Compliance Gap (opportunity for impact)	Low Est. compliance: >90%	Low Est. compliance: 70-75%	High Est. compliance: 0%	Mid Est. compliance: 60%	High Est. compliance: 30-40%	N/A (no mandate)	N/A (no mandate)
% Domestically processed (vs. imported already processed)	100%	92%	95%	100%	82%	68%	100%
% Industrially Processed	99% 3-5 large processors	100% 3 large	20% 100+ SMEs	96% 3 large	55% 20 large + >50 SMEs	30% 20 large + >50 SMEs	100% 2-3 large processors
Est. National Consumption (MT/year)	780K	1.6M	10.9M	4.6M	2.4M	6.9M	500K*
Est. Household Coverage	High 92.6% UNICEF, GFDx	High	Very High	Mid	Very High 98% Journal of Nutrition	Very High	Very High
Daily Food Availability (g/c/day) [national]	7	22	80**	50	26	75	not available

Notes: % Industrially Processed = share of domestic consumption from industrial-scale / large; ** Includes maize in all forms, not just maize meal; Compliance levels based on recent estimates from multiple sources in the absence of official figures. Further validation is required; % domestically processed: Wheat: Wheat import into Nigeria is only as wheat grains all of which is processed domestically; Sugar: Estimated refined sugar importation is 130,000MT which is 8% of total consumption; Est imported maize flour is 0.56MT/annum; Salt is imported into Nigeria in raw form and all of it is processed locally; Rice: 32% of total consumption is estimated to be smuggled into the country as milled rice; Bouillon: Key producers are based in Nigeria. Edible Oils: Estimate is based on 2022 estimated imports for Palm Oil (475,000MT), Soybean Oil (1,000MT), Peanut Oil (1,000MT); Est annual consumption of bouillon is based on an internal estimates and assumes 100m cubes are sold per day (from a per BioAnalyt paper) and an average cube weight of 14grams; Definition of industrial processing capacity– Rice - > 40MT per day of rice paddy; Sugar - > 120MT/day is based on National Sugar Development Council classification; Edible oil: 200MT per day based on classification used in 2019 Technoserve Study; Wheat: > 150MT/day based on industry experts perspectives taking into consideration significant capacity differentials within the leading processors.

Each vehicle has unique industry constraints + shared ecosystem challenges

Salt	Sugar	Maize Flour	Wheat Flour	Edible Oil	Rice	Bouillon
<p>Unclear QC procedures at processor level</p> <p>Loss of nutrients from inadequate fortification & exposure to sunlight at retail</p> <p>Gaps in regulatory monitoring</p>	<p>Unclear QC procedures at processor level</p> <p>Technical knowledge gaps at processor level</p> <p>Lack of synergy among regulatory agencies</p>	<p>Fragmented industry & limited industrial processing capacity</p> <p>High cost of regulation due to fragmentation leads to low level of interest in regulatory monitoring or surveillance</p>	<p>Cost pressures from import dependency & Russian war in Ukraine</p> <ul style="list-style-type: none"> \$12.94 / bushel in 2022 (from \$7.99 in 2010) <p>Complex, unreliable QA/QC</p> <ul style="list-style-type: none"> Assessing conformity with all parameters per standards is complex; burdens labs, strains limited resources High chance of analytical error in MN analysis where vitamins are added at low levels <p>Inconsistent implementation of government policies, lax border controls</p>	<p>Lack of traceability of loose oil (70% of sales)</p> <p>Smuggling of crude palm oil & refined edible oil</p> <p>Challenges sourcing forex to procure spare parts for industrial machinery</p> <p>Limited pull from consumers due to low awareness of MN deficiencies & benefits of Vitamin A, plus higher cost of packaged / branded oil</p> <p>Low incentive for SMEs to incur high capex; most produce unbranded oil, compete on price</p>	<p>No mandate</p> <p>Limited technical capacity</p> <ul style="list-style-type: none"> Fragmented industry Low % industrial processing No evidence of capacity for local FRK production <p>Undeveloped premix market</p> <ul style="list-style-type: none"> Fortificat'n would increase price based on FRK tech to be adopted by millers; inflationary pressures on pricing would make investments in FRK production hard for millers Ban on rice imports implies <i>potential</i> ban on FRK imports? Could create inflationary pressure on local brown rice needed for FRK production <p>Inconsistent policies re: rice production & trade</p>	<p>No mandate</p> <p><i>though 2 large processors are voluntarily fortifying</i></p>

Ecosystem Challenges

- High cost, unstable prices of imported premix / micronutrients required for premix (ie. Vitamin A palmitate for sugar, edible oil)
- High cost of & limited access to QA testing facilities in-house & externally
- Rising production costs due to currency devaluation
- Inadequate power supply, fuel shortage

7

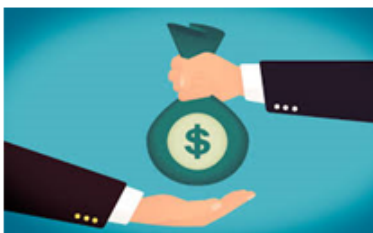
Enabling markets

Premix supply



- **Premix is largest incremental cost of fortification**
- **Limited local production and distribution;** Primarily imported
- **Addressing supply issues**, especially risks to supply such as forex volatility and importation bottlenecks, are critical for long term fortification compliance

Access to Finance



- **Access to finance is a critical issue** for rice and edible oil processors – 2 of the 3 value chains with the highest opportunities for impactful LSFF programmatic interventions
- Other key value chain actors such as domestic premix suppliers/manufacturers **also consider access to finance as a key issue**



To address *cross-cutting* challenges, 4 themes were identified for LSFF programming

Themes	USAID LSFF RF	Opportunities
<p>1 Strengthen the LSFF evidence base</p> <ul style="list-style-type: none"> • Research to improve understanding of LSFF policy efficacy: <ul style="list-style-type: none"> ✓ Impact of policies on processor costs & the overall cost of compliance ✓ Prospects for local production of fortification-related items (premix) ✓ Effectiveness of LSFF interventions, including mandates & impact on business behaviour • Promote greater third-party advocacy for food fortification 	<p>IR 2.1.1, IR 2.2.1</p>	<ul style="list-style-type: none"> • Support dissemination of recent national nutrient deficiency study; advocate to introduce more nutrition indices into Nigeria's demographic & health survey • Support efforts to introduce fortified rice - especially in policy design - to ensure long-term viability of new policies
<p>2 Finance solutions to deepen the premix market</p> <ul style="list-style-type: none"> • Research ways to improve premix availability & quality (e.g. central facility for input procurement, FRK production) • Improve financial intermediaries' awareness of the premix market, to improve access to finance for investment in local premix manufacturing (& FRK product'n) 	<p>IR 2.1.4, IR 2.2.2</p>	<ul style="list-style-type: none"> • Develop business case / incentives for premix production; sensitize producers from adjacent sectors to enter market • TA to set up a centralized premix / tech procurement facility • Establish subsidized credit lines for SMEs to acquire fortification, packaging, and testing equipment
<p>3 Improve QA/QC systems</p> <ul style="list-style-type: none"> • Improve access to internal testing technology that can be integrated with external compliance reporting systems • Support innovation for QA/QC for food vehicles in fragmented industries • Leverage digital solutions to improve compliance (QA/QC & reporting systems) 	<p>IR 2.1.3</p>	<ul style="list-style-type: none"> • Develop & support industry digital QA/QC solutions to facilitate adherence to new standards
<p>4 Collaborate & innovate in regulatory monitoring</p> <ul style="list-style-type: none"> • Strengthen emerging self-regulatory systems, ie. Micronutrient Fortification Index to encourage increased compliance & lower surveillance costs • Strengthen information and data sharing among the 3 regulatory agencies involved in food QC, to progress towards collaborative regulation 	<p>IR 2.1.3 IR 2.1.7</p>	<ul style="list-style-type: none"> • Innovation challenge to identify smart, efficient ways for monitoring & QC in fragmented markets • Support development of system of rewards & penalties to promote consistent compliance • Support initiatives to improve collaborative regulation on food safety and control across SON, NAFDAC, FCCPC

Wheat flour, edible oil & rice were prioritized based on key market dynamics; Industrial-scale processors were assessed re: their capacity to drive LSFF

Data sources: interviews with processors and RIPAN, N= 12; TechnoServe survey of 40 edible oil processors from 6 regions of Nigeria (slide 54) and ~400 consumers (slide 55)

		Wheat flour	Edible oil	Rice
Share of large-scale food processors		● 96 %	● 55 % **	● 30 %
Existing level of fortification compliance		● 60 %	● 30-40 % **	NA [standard in progress]
Interest in fortifying		NA (mandatory)	NA (mandatory)	● some
Average Technical capability	Technical capacity	●	● ie. lack of awareness of Vit. A dosage standards	● require fortification training
	Procurement / storage	●	●	● inadequate facilities to store fortificants
	Staffing / Training	●	● require additional training	● require instruction to roll out fortified product
	Quality Assurance Systems	●	● lack of QC systems	● current systems not designed to monitor fortified product
	Traceability	● use labels, but hard to monitor at retail if sold without packaging	● concern re: adulteration	● problematic
Average Commercial capability	Operational efficiency	●	●	●
	Financial capacity	●	●	●
	Packaging	●	● concern re: tampering	● will need to update
	Logistics & Distribution	●	●	●
	Marketing & Consumer awareness	● fortification has been marketed as CSR; opportunity to improve consumer awareness	● positive/neutral response of low income consumers to unbranded oil, though aware of need for Vit. A fortification	● very low, LSFF is new initiative
Average Processor Capacity to Drive LSFF:		● high	● mid	● mid


Legend: ● Full capacity to support LSFF ● Partial capacity ● Low capacity

** difficult to determine due to influx of imported & local unbranded oil

LSFF strategies for prioritized vehicles: wheat flour, edible oil, rice


	Wheat flour	Edible oil	Rice
Status of Mandate	Mandatory	Mandatory	Standard in-progress
Compliance Gap	Mid Est. compliance: 60%	High Est. compliance: 30-40%	N/A
% Industrially Processed	96% 3 large	55% 20 large + >50 SMEs	30% 20 large + >50 SMEs
Opportunity Summary	<p>Consolidated industry & strong HH coverage = strong base for increased impact via improved compliance.</p> <p>Dominance of large-scale processors enables this vehicle to be a viable “sandbox” for innovation around fortification.</p>	<p>Presence of mandates & high HH coverage = a foundation to build upon.</p> <p>Primary challenge is navigating industry fragmentation; achieving consistent compliance amongst <i>large</i> processors alone could yield significant positive impact re: vitamin A deficiency.</p>	<p>Advanced efforts to introduce mandatory regulation. 5-yr roadmap developed last year with WFP’s support to Ministry of Health through GAIN.</p> <p>High HH coverage</p> <p>New industrial capacity coming on stream over next few years indicates <i>greater consolidation</i>.</p> <p>Policy & technical support = critical for success</p>
Support to Processors [Relevant IR Activity from USAID LSFF Results Framework]	<ul style="list-style-type: none"> Support digital QA/QC solutions for industry to facilitate adherence to standards [IR 2.1.3] Support sourcing, given difficulties due to rising costs of imported consumables relevant to fortification [IR 2.1.2] 	<ul style="list-style-type: none"> Technical support to improve QA/QC, to facilitate adherence to standards [IR 2.1.3] Financing/sourcing support to mitigate high production costs & reduce fear/risk of pricing products out of market [IR 2.1.2] 	<ul style="list-style-type: none"> TA to ensure integration of FRK production lines with minimal impact on production cost [IR 2.1.2] Financing support, particularly for equipment [IR 2.2.2] TA to ensure quality production of fortified rice and kernels (if produced locally) [IR 2.1.2, 2.1.4]
Improvements to Enabling Environment [Relevant IR Activity from USAID LSFF Results Framework]	<ul style="list-style-type: none"> Support to local premix manufacturers to help reduce cost of premix [IR 2.1.4] Support regulatory agencies to adopt digital QA/QC solutions and data sharing, to improve compliance 	<ul style="list-style-type: none"> Support efforts to minimize degradation in fortification quality from open market sales [IR 2.1.3] Address smuggling and informal distribution of unfortified oil [IR 2.1.1; 2.1.3] Support regulatory agencies to improve testing, adopt digital QA/QC solutions, and adopt data sharing, to improve compliance [IR 2.1.7] 	<ul style="list-style-type: none"> Foster evidence-based policy guidance to inform the regulatory approach to introducing rice fortification [IR 2.1.1, 2.2.1] Support & advance promising FRK production and rice fortification technology [IR 2.1.4] Strategic communications & marketing support to drive consumer demand [IR 2.1.2]

Projected value-add of LSFF RF activities (1 of 2)

 = biggest opportunities to add value via LSFF program

USAID LSFF Results Framework Activities		Wheat Flour	Edible Oil	Rice
IR2.1: Food industry compliance with fortification standards through business development, food technology and quality control and marketing guidance strengthened				
Sub-IR 2.1.1	Food industry mapping/ scoping/ analyses	Industry and consumption data is available. Limited scope to add value from further studies.	Significant scope for further studies to generate accurate data on the activities of smugglers & illegal importers, a major industry challenge.	A landscape study on voluntary rice fortification was commissioned, and there have been extensive consultations. As a new initiative, considerable scope for further studies
Sub-IR 2.1.2	Help offset fort. costs through business/ operational / tech support/ marketing	Need to determine what % of operational costs are driven by fortification.	Though fortification costs are a fraction of profit (0-5%), and processors were assessed to be financially strong/efficient, scope for increased TA, ie. in quality control.	Fortification costs (CAPEX & OPEX) likely to be high initially. Significant scope for technical & financial support from Government and International Development Agencies.
Sub-IR 2.1.3	Strengthen compliance with labeling standards, digital systems, etc.	Industry dominated by large, sophisticated players that are both motivated & have the financial and technical resources to comply with regulations. (Though a player expressed concerns re: certain regulatory requirements and is actively consulting regulators)	Strengthen compliance/enforcement – especially dealing with unbranded, unfortified vegetable oil and adulteration of fortified vegetable oil.	Players and regulators will need to build capacity in QA/QC and monitoring/compliance. Significant scope for improvement.
Sub-IR 2.1.4	Ensure premix availability, quality and traceability	Fortification inputs (premix, MNs) were ranked #2 of top 3 fortification costs. Significant scope to add value by exploring cost mitigation initiatives.	Fortification inputs (premix, MNs) reported as 1 of top 3 fortification costs. Significant scope to add value by lowering costs.	Availability of premix at a reasonable price to millers who will voluntarily fortify, will likely be a major challenge. Significant scope to add value via PPP schemes, collaboration with int'l development agencies, and exploring feasibility of Government subsidies.
Sub-IR 2.1.5	Improve packaging of cooking oils and sugar	N/A	Vegetable oil is often packaged in transparent containers – could be a source of Vitamin A loss. Significant scope to improve packaging/ package design.	N/A
Sub-IR 2.1.6	Promote use of fortified ingredients in processed, blended foods	Fortification is already mandatory. All products produced by a key player are fortified, unless expressly demanded by special industrial customers. Limited scope.	Fortification is mandated, but survey results illustrate that consumer awareness is somewhat low. Significant scope for improvement	Rice usually consumed in grain form; limited use as ingredient in processed / blended foods, though possible prospects in fortifying “tuwo” (rice fufu).

Projected value-add of LSFF RF activities (2 of 2)

 = biggest opportunities to add value via LSFF program

USAID LSFF Results Framework Activities		Wheat Flour	Edible Oil	Rice
Sub-IR 2.1.7	Support tools and brand/marketing indices to improve compliance	More data required for this analysis.	Only 38% of surveyed processors (survey led by TechnoServe), knew recommended Vitamin A dosage. From the same survey, 15% of processors lacked quality control systems. Significant scope for improvement.	Significant scope to add value by exploring, initiating and monitoring programs/initiatives to improve (voluntary) compliance.
Sub-IR 2.1.8	Engage private sector to foster fortification alliances	Fortification currently mandated; likely limited benefit from fortification alliances.	Edible oil fortification currently mandated; likely limited benefit from fortification alliances.	Potential benefits, significant scope for engagement with private sector players: millers, local/int'l premix suppliers, regulators, other technical partners).
IR2.2: Food industry compliance with fortification standards linked to improved access to finance and financing terms for general operations, as well as procurement of fortificants and food processing equipment				
Sub-IR 2.2.1	Conduct studies on fortification costs & effects on price and margins	Limited studies on food fortification costs and impact on pricing, recurrent costs etc.	A few studies have been conducted on edible oil fortification costs, and their impact on pricing, capital and recurrent costs. These studies will need to be updated to reflect current challenges with inflation, availability of foreign exchange etc.	Rice fortification is still at the conceptual stage and there is limited information on the impact of fortification costs on profit margins. Current studies reflect high-level cost estimates – since rice fortification is yet to be piloted.
Sub-IR 2.2.2	Increase food fortification-compliant industry's access to finance	Access to finance is a challenge but not as acute as with other food vehicles – although issues with foreign exchange availability persist.	Access to finance is a significant challenge for edible oil processors. Interventions to improve capacity to fund equipment purchases, mill expansion and working capital in a sustainable way could be impactful.	Lack of significant collateral, high interest rates, short repayment terms and short tenor of loans were reported as major impediments to fortification. Most respondents are seeking financing for equipment purchases, construction, working capital and inventory purchases.
Sub-IR 2.2.3	Advisory services to improve access to finance	Given that access to finance issues are not acute in this value chain, advisory services may yield only incremental value	Technical advisory services should be targeted at medium-large scale millers to improve their readiness for assessing multiple sources of capital	Technical advisory services will be critical to successful introduction of rice fortification. TA targeted at lenders could be incredibly valuable.

Recommended to keep a *close watch on sugar & bouillon cubes*; *limited impact opportunities for salt & maize*

	Sugar	Bouillon Cubes	Salt	Maize
Status of Mandate	Mandatory	No standard	Mandatory	Mandatory
Compliance Gap (opportunity for impact)	Low Est. compliance: 70-75%	N/A No mandate	Low Est. compliance: >90%	High Est. compliance: 0%
% Industrially Processed	100% 3 large	100% 2 large	99% 3-5 large processors	20% 100+ SMEs
Rationale	<p>Consolidated industry, high HH coverage, and strong technical/financial capacity.</p> <p>However, estimated compliance is relatively high, suggesting limited opportunity to drive impact.</p> <p>Assess against opportunity cost & relative impact of investing in another vehicle.</p>	<p>High HH coverage, however:</p> <ul style="list-style-type: none"> • No standard / mandate, although 2 major bouillon cube producers <i>voluntarily fortify</i>. • Requires more evidence of efficacy as a delivery vehicle for LSFF • Seen as controversial, largely due to salt & MSG content. Some view it as addictive, bad for health, not good for kids (similar argument for sugar). 	<p>Given high compliance (est. >90%), there is limited additional opportunity to drive impact.</p>	<p>Very high industry fragmentation (<i>more than rice</i>) & preponderance of small-scale milling = significant challenges for regulatory monitoring & enforcement.</p> <p>Low appetite for enforcement & limited prospects for industry consolidation limit chances of success for LSFF programming.</p>



ANNEX: OUTPUT TEMPLATE

[Download a PDF version of this PowerPoint](#) template.

SLIDE 1: Title and research objective



Large-Scale Food Fortification (LSFF) Opportunity Assessment for Country

Research Objectives

- Identify the biggest opportunities to expand LSFF of staple foods and condiments in collaboration with the industrial food industry:
 - Priority food and condiment vehicles
 - Approaches to overcome key LSFF constraints for priority vehicles in collaboration with industrial or large scale food processors, in line with the USAID Results Framework

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SLIDE 2: Scope of the assessment



Scope of the Assessment

X Foods & condiments explored

Food or condiment #1	Rationale for selection
Food or condiment #2	Rationale for selection
Food or condiment #3	Rationale for selection
Food or condiment #4	Rationale for selection
Food or condiment #5	Rationale for selection
Food or condiment #6	Rationale for selection
Food or condiment #7	Rationale for selection

Definition of industrial / large-scale processor

A processor with:

- significant market share; or
- industrial processes and the installed capacity, technical capacity & resources (i.e. staff, etc.) to produce quantities that would have significant market share

- Food or condiment #1:** >X MT/day
- Food or condiment #2:** >X MT/day
- Food or condiment #3:** >X MT/day
- Food or condiment #4:** >X MT/day
- Food or condiment #5:** >X MT/day
- Food or condiment #6:** >X MT/day
- Food or condiment #7:** >X MT/day

Guidance:

Slide 2 establishes the context and scope of the LSFF assessment, specifically: vehicles explored; rationale for their selection; definition of industrial processors.

The definition & daily volumes for “industrial processors” can vary by country, i.e.,:

Nigeria: Rice: >200 MT/day of paddy, Edible oil: >120 MT/day, Wheat & Maize: >150 MT/day, Sugar: >120 MT/ day

Zambia: Rice: >100 MT/day of paddy, Edible oil: >50 MT/day, Wheat & Maize: >25 MT/day, Sugar: >50 MT/ day

SLIDE 3: Historical context: LSFF in Country



Historical Context: LSFF in COUNTRY

Legislation	
Successes & challenges	
Key LSFF funders & implementing organizations in Country	
Areas of focus for past and current LSFF program in Country	

3

SLIDE 4: Key market dynamics



X of the **X** foods & condiments targeted based on key market dynamics

	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	NON-targeted food / condiment	NON-targeted food / condiment
Status of Fortification Mandate <i>mandatory, voluntary, no standard</i>	X	X	X	X	X	X	X
Compliance Gap (retail stage) <i>(Estimated % compliance, if applicable)</i>	X % (X %)	X % (X %)	X % (X %)	X % (X %)	X % (X %)	X % (X %)	X % (X %)
% Processed In-Country	X %	X %	X %	X %	X %	X %	X %
% of In-Country Processing by Industrial-Scale Processors <i>(# Industrial-scale processors)</i>	X % (X)	X % (X)	X % (X)	X % (X)	X % (X)	X % (X)	X % (X)
Estimated household coverage	X %	X %	X %	X %	X %	X %	X %
Daily food supply (kcal/capita/day)	X	X	X	X	X	X	X
Food supply growth	X %	X %	X %	X %	X %	X %	X %
Prospect for LSFF Program Impact: <i>high, medium, low</i>	X	X	X	X	X	X	X

Sources: X

Prospect for LSFF Program Impact:



High



Medium



Low

Guidance:

Slide 4 establishes key market dynamics to help shortlist vehicles for deeper study (orange box). GFDx is a helpful source for some of these data points. Highlight each box in the appropriate color to show prospect for LSFF program impact, based on the legend.

Industry Compliance Gap = difference between 100% compliance and the estimated % compliance at retail stage, if available via secondary sources. A bigger gap signals greater opportunity for impact via an LSFF program. If compliance data is not available, market sampling can be done using the [FACT Market Assessment](#).

% Processed In-Country = % of consumption in the country that is processed in-country.

Guidance for Results Framework Activities:

When data is not available via secondary research, it denotes scope for **Sub-IR 2.1.1**. A significant compliance gap denotes scope for **Sub-IR 2.1.7**.

SLIDE 5: Top 5-10 processors of target vehicles



Top 5-10 Processors of Target Food Vehicles

**Targeted food /
condiment**

**Targeted food /
condiment**

**Targeted food /
condiment**

**Targeted food /
condiment**

**Targeted food /
condiment**

Top 5-10 Firms	Market Share	Installed Capacity (MT/Day)	Top 5-10 Firms	Market Share	Installed Capacity (MT/Day)	Top 5-10 Firms	Market Share	Installed Capacity (MT/Day)	Top 5-10 Firms	Market Share	Installed Capacity (MT/Day)	Top 5-10 Firms	Market Share	Installed Capacity (MT/Day)

Sources: X

Guidance:

Slide 5 lists the top industrial-scale processors for each of the targeted vehicles.

Top industrial firms = the 5-10 food processors with the highest market share for each targeted vehicle in the country.

Researchers can identify and rank primary industrial processors through secondary research, where available. It can also be filled through primary interviews with industry associations. This data can help the researchers target key processors for interviews, to assess their capabilities.

SLIDE 6: Definitions of food processor capabilities



Food Processor Capabilities: Definitions

		Definition
Average Technical capability	Technical capacity	Feasibility of modifying the process flows to accommodate fortification; Identified best point for fortification in their process; Includes micro-dosifier, mixer, etc.
	Procurement/ storage	Defined procurement processes; storage capacity, etc.
	Staffing/ Training	Equipped production personnel, with experience or training in fortification
	Quality Assurance Systems	Sign of GMPs, GHPs and related practices; Certified for ISO 9001 Quality Management System; ISO 22000; In-house laboratory or access to labs/ testing facilities; Samples in-process and finished products for testing
	Traceability	Batch numbering system, with date of manufacturing; utilize traceability labels
Average Commercial capability	Operational efficiency	Inventory management; employee health & safety; environmental safeguards
	Financial capacity	Strong financial records and controls; collateral base; access to finance
	Packaging	Packaging adequate to maintain integrity of fortified products in the market
	Logistics & Distribution	Access to logistics and distribution systems that retain quality of product / fortificant
	Marketing & Consumer awareness	Strong marketing capability; Consumers with awareness of fortification benefits
LSFF capability of processors:		Average capability of processors re: readiness for fortification

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SLIDE 7: Capabilities of industrial-scale processors



Food Processor Capabilities: Summary

		Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment
Average Technical Capability	Technical capacity					
	Procurement / storage					
	Staffing / training					
	Quality assurance systems					
	Traceability					
Average Commercial Capability	Operational efficiency					
	Financial capacity					
	Packaging					
	Logistics & distribution					
	Marketing & consumer awareness					
Average processor capacity to support LSFF:						

Legend: ■ High capacity to support LSFF ■ Partial capacity ■ Low capacity

Highlight each box in the appropriate color, based on this legend

Source: X primary interviews

Guidance:

Slide 7 summarizes technical and commercial capabilities of industrial food processors in each of the targeted food/condiment value chains. This can be completed through processor interviews. Color each box based on the legend.

Guidance for Results Framework Activities:

This data can help determine the scope for adding value through **Sub-IR 2.1.2**, **Sub-IR 2.1.3**, and **Sub-IR 2.1.5**.

SLIDE 8: Estimated average costs of fortification



Incremental Costs of Fortification

Capital and recurrent costs of fortification

Estimated average annual incremental costs of fortification (\$ per MT)

	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment
Annualized capital costs					
Premix cost					
Micro-feeder operating cost					
Maintenance, Marketing, QA/QC, etc.					
Estimated average annual total incremental cost of fortification (\$ per MT)					

Guidance: In case cost data is not available through secondary resources, kindly note that Sub-IR 2.2.1 of USAID Results Framework (Conduct studies on fortification costs and effects on price and margins) might have high scope to add value. One of the ways cost can be estimated is using [FFI's cost-benefit tool](#)— this assists countries in comparing the estimated cost of implementing a national fortification program to the benefits the program will generate in return, also referred to as the program's cost:benefit ratio.

Sources: [X](#)

Guidance:

Slide 8 estimates the incremental costs of fortification. This data can be collected from secondary sources, or can be estimated using [FFI's cost-benefit tool](#); this tool helps compare the estimated cost of implementing a national fortification program to the benefits the program will generate in return, also referred to as the cost : benefit ratio.

Guidance for Results Framework Activities:

If cost data is not available through secondary resources, there might be high scope to add value through **Sub-IR 2.2.1**.

SLIDE 9: Industry constraints/ecosystem challenges



Stakeholder Capacities & Constraints

Capacities & Constraints per Target Vehicle				
Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment	Targeted food / condiment
X	X	X	X	X
X	X	X	X	X
X	X	X	X	X
Cross-cutting Ecosystem Challenges				

Source: X primary interviews

Guidance:

Slide 9 summarizes the capacities and constraints of key stakeholders in the LSFF ecosystem, considering value chain-specific capacities & constraints as well as ecosystem capacities & constraints that cut across value chains. Key stakeholders include:

Food Processors; Regulatory/ monitoring agencies; Industry/ market associations; Finance providers; Consumers/ civil society; Premix suppliers; Importers of raw materials; Distributors/ retailers and marketers.

Guidance for Results Framework Activities:
Helps to estimate the potential value-add of **Sub-IR 2.1.2, Sub-IR 2.1.4 and Sub-IR 2.1.8.**

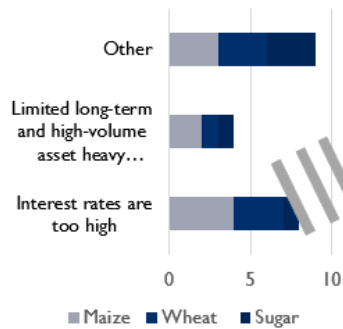
SLIDE 10: Access to finance



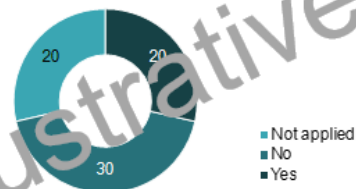
Access to Finance

Processor perspective

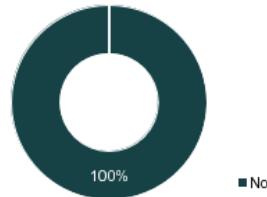
Do you face any of the below challenges obtaining financing?



Have you received a loan in the last 12 months?



Are you interested in receiving advisory services to address access to finance gaps?



Source: X primary interviews

Financial institution perspective

Do you have clients in the following food processing industries?

	Bank 1	Bank 2	Bank 3
Targeted food / condiment			
Targeted food / condiment			
Targeted food / condiment			
Targeted food / condiment			
Targeted food / condiment			

Guidance:

Slide 10 summarizes access to finance challenges for industrial food processors in each of the targeted food/condiment value chains.

Guidance for Results Framework Activities:

This can help determine the scope for adding value through Sub-IR 2.2.2 and Sub-IR 2.2.3.

SLIDE 11: Summary of LSFF feasibility per vehicle



Summary: LSFF Feasibility Per Vehicle

LSFF Feasibility
(High to Low)

	Priority Vehicle			NON-Priority Vehicle	
Status of Mandate	X	X	X	X	X
Compliance Gap	X %	X %	X %	X %	X %
% Processed In-Country	X %	X %	X %	X %	X %
% of In-Country Processing by Industrial Processors (# Industrial scale processors)	X % (X)	X % (X)	X % (X)	X % (X)	X % (X)
% Households Consuming	X %	X %	X %	X %	X %
Processors' Interest in LSFF					
Processors' LSFF Capabilities					
Other Themes Surfaced in the Research					

Guidance:

Slide 11 summarizes key data points from previous slides to help prioritize for LSFF programming. Vehicles can be prioritized (orange box) based on:

- **Status of mandate:** feasibility of LSFF expected to be higher when mandatory
- **Compliance gap:** potential impact of LSFF programming expected to be greater when the compliance gap is larger
- **% Processed In-Country:** recommended actions will depend on whether the vehicle is primarily processed locally or imported
- **Share of industrial processors:** feasibility of LSFF expected to be higher when the share of industrial processors is larger
- **% Households consuming the vehicle:** potential impact of LSFF program expected to be greater when % households consuming the vehicle is higher
- **Processors' interest in LSFF:** feasibility of LSFF expected to be higher with greater processor interest
- **Processors' LSFF capabilities:** LSFF feasibility is expected to be higher with stronger technical and commercial processor capabilities. Recommended actions will depend on technical and commercial capabilities of processors.

Other themes: Regional & stakeholder priorities, etc.

SLIDE 12: LSFF opportunities for priority vehicles



LSFF Opportunities for High-Feasibility Vehicles

	Priority Vehicle	Priority Vehicle	Priority Vehicle
Technical Strategy Summary			
Support to Processors			
Improvements to Enabling Environment			
Changes to support services (pre-mix, finance, etc.)			

Guidance:

Slide 12 summarizes the recommended LSFF program strategy & approaches for each priority vehicle. The following questions are intended to help the researchers complete the table:

- 1) Given the context and the challenges & opportunities surfaced during the research, what is the recommended overarching LSFF strategy for each priority vehicle?
- 2) What forms of support to industrial processors seem to offer the great potential for enabling them to advance LSFF?
- 3) What types of improvements to the enabling environment (monitoring agencies, international organizations, etc.) have the greatest potential for improving LSFF feasibility and compliance?
- 4) What types of changes to support services (premix supply, access to finance, etc.) have the greatest potential for improving LSFF feasibility?

SLIDE 13: Value-add of Results Framework activities

Value Addition of Results Framework Activities: all vehicles

Activity		Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4	Vehicle 5
IR 2.1: Food industry compliance with fortification standards through business development, food technology, quality control & marketing guidance strengthened						
Sub-IR 2.1.1	Food industry mapping/ scoping/ analyses					
Sub-IR 2.1.2	Help offset fort. costs through business/ operational / tech support/ marketing					
Sub-IR 2.1.3	Strengthen compliance with labeling standards, digital systems, etc.					
Sub-IR 2.1.4	Ensure premix availability, quality and traceability					
Sub-IR 2.1.5	Improve packaging of cooking oils and sugar					
Sub-IR 2.1.6	Promote use of fortified ingredients in processed, blended foods					
Sub-IR 2.1.7	Support tools and brand/ marketing indices to improve compliance					
Sub-IR 2.1.8	Engage private sector to foster fortification alliances					
IR2.2: Food industry compliance with fortification standards linked to improved access to finance and financing terms for general operations, as well as procurement of fortificants and food processing equipment						
Sub-IR 2.2.1	Conduct studies on fortification costs and effects on price and margins					
Sub-IR 2.2.2	Increase food fortification-compliant industry's access to finance					
Sub-IR 2.2.3	Advisory services to improve access to finance					

- 1) Paste the appropriate Harvey Ball (see legend) into each box to show the projected value add of each Sub-IR activity for each vehicle
- 2) Highlight in yellow all boxes with Harvey Ball scores of 4 & 5



Legend: scope to add value; 5 = high, 1 = low

Guidance:

Slide 13 summarizes the estimated value addition of IR2 activities from the USAID LSFF Results Framework.

Paste the appropriate Harvey Ball (see legend) into each box to show the projected value-add of each Sub-IR activity for each shortlisted vehicle. Highlight in yellow all boxes with Harvey Ball scores of 4 & 5.

SLIDE 14: Priority Results Framework activities



Priority Results Framework Activities: all vehicles

Sub-IR Activity **Opportunities for Impact**

2.X.X: ...	X
2.X.X: ...	X
2.X.X: ...	X
2.X.X: ...	X
2.X.X: ...	X
2.X.X: ...	X

- 1) **On the left** (red boxes): copy/paste all Sub-IR activities from slide 13 for which 1 or more vehicles has a Harvey Ball score of **4 or 5**
- 2) **On the right**: For each Sub-IR activity listed, write the rationale and emerging impact opportunities for each vehicle with a score of **4 or 5** (slide 13)

Guidance:

Slide 14 highlights the Sub-IR activities from IR2 that present the highest estimated value-add.

On the left (red boxes): copy/paste all Sub-IR activities from slide 13 that have at least one Harvey Ball score of 4 or 5 (see yellow highlight).

On the right: For each of these Sub-IRs, write the rationale and the emerging impact opportunity for each vehicle with a score of 4 or 5.

