



A blueprint for the design and implementation of large-scale food fortification programs

Evidence-based guidance to support large-scale food fortification program managers and planners

MAY 2026

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ACKNOWLEDGEMENTS

We express our gratitude to the following individuals for their technical leadership and guidance throughout the creation and review of the initial Blueprint: Rizwan Yusufali, Timothy Quick, Omar Dary, Scott Montgomery, Ana M. Sanson-Rosa, Chris Kirby and Vilma Tyler.

ATTRIBUTION

Please cite this work as follows: Rowe L.A., Darwa R., Chadha M., & Arabi M. (2026). *A blueprint for the design and implementation of large-scale food fortification programs*. Nutrition International.



This **Blueprint** was developed through a collaboration between Nutrition International and the Food Fortification Initiative from January to June 2021.

Various partners and organizations working in fortification have created differing food fortification frameworks to guide program managers through the design, implementation, scale-up and monitoring of fortification programs. With these multiple frameworks available, it can be challenging for nations to determine optimal methods needed to design, implement and sustain fortification programs, particularly following the cessation of external technical support.

To this end, Nutritional International and the Food Fortification Initiative aimed to review existing frameworks and craft a novel approach as a means of operationalizing the review findings with ideals derived from current frameworks. Based on strengths, weaknesses, innovative concepts and gaps found in current frameworks and obtained from stakeholder discussions, the initial Blueprint was drafted.

Between November 2025 and March 2026, Nutrition International undertook a second review of the Blueprint to capture new tools, resources (guidelines, publications, policy briefs, experiences, etc.) and learnings. When practiced, these will ensure that large-scale food fortification (LSFF) programs — an imperative component of food systems — are implemented with the required technical and operational expertise and eventually integrated in national and subnational nutrition priorities. An internal Nutrition International validation committee was set up to review and approve the revisions.

The Blueprint is publicly posted and available on Nutrition International's website. The full study can be accessed here: [A blueprint for fortification planning and programming: Lessons learned from an analytical review of existing fortification frameworks.](#)



The Blueprint aims to provide a broad-spectrum guide for program managers (within governments and/or partner organizations) of large-scale, mandatory food fortification programs. It considers learnings from a multitude of organizations and individuals, in addition to components known about current fortification programming shortcomings, such as the limited attention given to effective private sector business models, capacitating national academic institutions and reassessing fortification program design.

The goal of a single, streamlined fortification framework, drawing on review findings, is multi-faceted. It intends to do the following:

- 1 Provide a comprehensive and actionable design guide for individuals and agencies supporting fortification programming.
- 2 Better inform governments and partners about key elements for consideration at each stage of the fortification process, including elements needed for scaling and sustaining effective interventions.
- 3 Harmonize the approach to key programming elements, such as regulatory monitoring and the creation of fortification standards.
- 4 Draw renewed attention to key programming elements often absent from fortification program design.
- 5 Inform improved fortification policies and practices, enabling the design of more efficient and sustainable programs that retain the ability to generate a robust and meaningful impact on target populations.

Further, the Blueprint intends to refresh program thinking and priorities and to provide renewed guidance concerning program components required to scale fortification initiatives and achieve nutrition impact goals.

The Blueprint is organized into seven major programming actions, with each action further separated into specific components. Where relevant, the Blueprint provides existing tools and resources to enable the user to complete each action. Although the seven major programming actions are presented as a sequence of steps, it should be noted that several of the activities could occur simultaneously. The sequencing of the actions should be taken as a general guide and should not be interpreted as a requirement for countries to explicitly follow them as numbered.

For example, although countries will need to establish standards before the private sector begins fortification, a fortification strategy or policy does not necessarily have to be formally prepared before standards or legislation are finalized. Similarly, engaging and/or strengthening civil society or national laboratories can commence in the early stages of fortification implementation and does not have to wait until the formulation of policies or strategies.

The findings from the review and the proposed Fortification Blueprint intend to provide a call to action (and a means to operationalize this call to action) aimed at national and global-level policy makers, program implementers and donor agencies around the need for a renewed look at fortification program design. Due attention in the program design process is required to ensure the inclusion of innovative models and overlooked or undervalued programming components that break from status quo operations and aid in swift and feasible program adoption and maintenance.

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HIGH-LEVEL OVERVIEW

ASSESS

- 1 Justify:** Identify need and feasibility with national stakeholders
 - Identify need and relevance of fortification; assess fortification as part of an optimal mix of interventions.
 - Demonstrate feasibility of fortification.
 - Provide justification for fortification.

ANALYZE

- 2 Galvanize:** Map and motivate key stakeholders
 - Map fortification stakeholders.
 - Build partnerships/alliances.
 - Garner political will.
 - Support national budgetary inclusions.
 - Support political, private and civil sector advocacy.
 - Align national programs with global/regional efforts and guidance bodies.
 - Identify and mobilize fortification champions.

ACT

- 3 Enable:** Establish guiding structures related to policy, legislation, standards and monitoring guidelines
 - Draft fortification policy.
 - Draft fortification legislation.
 - Establish fortification requirements included in food standards or food regulations.
 - Identify/establish inspection, audit and enforcement opportunities within existing food control system.

- 4 Operationalize:** Establish an enabling environment for industry
 - Identify industry scale-up support and ensure strong QA/QC protocols (including quality premix and equipment).
 - Explore effective business models for food producers.
 - Ensure creation of a level playing field.

- 5 Monitor:** Enable inspection, audit and enforcement
 - Establish and strengthen regulatory monitoring and enforcement systems (including training inspectors on regulatory monitoring practices or an alternative means of assessing compliance).
 - Capacitate civil society to hold industry accountable.

- 6 Evaluate:** Establish coverage and nutritional impact assessment and evaluation
 - Support integration of key indicators into ongoing national surveys.
 - Capacitate academic institutions.

REASSESS

- 7 Review and reassess:** Ensure continued program harmonization and optimization
 - Review relevance and appropriateness of fortification standards and program design, and make adjustments as necessary.

CROSS-CUTTING THEMES

Institutionalize: Ensure national program ownership

- Integrate fortification into existing nutrition plans and national systems.
- Support the creation of academic curriculum on fortification.
- Establish mechanisms that favour financial self-sustainability.

Mainstream gender equality and safeguarding into LSFF programs: Integrate gender equality in public and private sector supporting fortification efforts

- Integrate gender-responsive business practices in fortification industry.
- Advocate for women as leaders to provide technical oversight to and for enforcement of fortification programs.

Do no harm: LSFF programs should not cause unintentional harm to the target population

- Reducing or eliminating industrially produced trans fatty acids in fortified oil and food items prepared using the same.
- Guidance to integrate sodium reduction with salt fortification program.
- Use of iodized salt for processed foods.

Food systems: Reiterate that LSFF programs are an integral component of food systems and need to be integrated in national and sub-national nutrition priorities