

FOOD FORTIFICATION INITIATIVE

THE FINAL SPRINT

A Bold Approach to Scale the Impact of
National Fortification Programs Across
Africa

JANUARY 2022



Food Fortification Initiative

Enhancing Grains for Healthier Lives

THE FINAL SPRINT

BY THE NUMBERS



43

countries supported



21 M

cases of anemia among WRA averted



43,000

cases of NTDs in children averted



13 M

USD budgeted over 4 years



WRA: women of reproductive age
NTDs: neural tube defects

EXECUTIVE SUMMARY

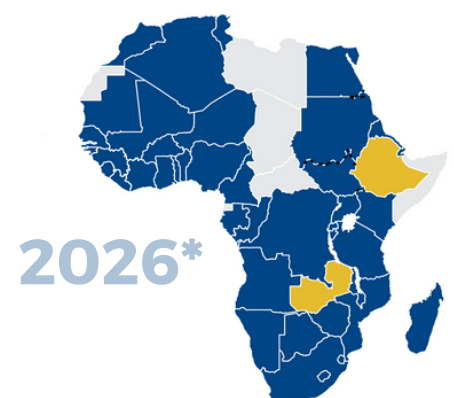
To take large-scale fortification programming across the finish line in countries in Africa that have demonstrated high potential for impact and high feasibility for fortification, the Food Fortification Initiative (FFI) proposes the "Final Sprint," a bold, focused approach that places individuals on the ground in selected countries. These individuals will serve to guide government, private sector, and civil society entities over a sustained four-year period through a process that ensures quality programs are put in place using innovative business models and sustainability plans that position each country with the ability to own, operate, and shape the program long into the future.

The Final Sprint will support 43 countries using a unique staffing and technical assistance model. For just over \$13 million over four years, the approach will avert nearly 21 million cases of anemia among women of reproductive age (WRA) and 43,000 debilitating neural tube defects (NTDs) in children *per year* by making quality fortified wheat flour, maize flour, and/or rice available to the most vulnerable through country-led fortification programs.

LEGEND

-  Country has legislation to mandate fortification of wheat flour alone or in combination with maize flour [1]
-  Country allows voluntary fortification of industrially milled wheat flour or maize flour [1]

2022* Map includes Namibia and Lesotho, countries that have voluntary fortification but do not have the documentation required to be included in the dataset that populates this map [1]. 2026* Map shows the projected impact of the Final Sprint approach. Countries colored grey and yellow are not included in the Final Sprint based on the approach's selection criteria. Countries colored yellow have voluntary programs but are excluded from FFI's strategic focus because of partner saturation/limited FFI value add (Ethiopia) and low wheat flour and rice consumption and small-scale maize flour environment (Zambia).



BACKGROUND

Tremendous progress has been made across Africa in the large-scale fortification of wheat flour, maize flour, and rice since Smarter Futures—a project funded by the Netherlands Ministry of Foreign Affairs, led by FFI, and supported by a diverse steering committee—was formed in 2007. In 2007, only seven countries had legislation for mandatory or voluntary fortification of a grain [1]. As of January 2022, 29 countries have legislation to mandate the fortification of wheat flour alone or in combination with maize flour, six countries allow the voluntary fortification of either flour, and—though no country in Africa mandates the fortification of rice yet—Smarter Futures has mapped opportunities for rice fortification. Although this progress cannot be attributed to the impact of Smarter Futures alone, the program's meetings, workshops, trainings, and other events have been attended by stakeholders from 41 countries. Thirty-six of these 41 countries are now planning, implementing, or monitoring a national fortification program.

However, significant gaps still remain. This includes a range of countries that have demonstrated high nutritional need, high potential for impact, and the presence of political will but do not yet have national programs in place [2,3], as well as countries that have programs in place (and in some cases partners providing fortification support), but have not achieved effective implementation and adequate monitoring [4,5].

PROPOSED MODEL

Based on work done under the Smarter Futures grant over the past 15 years and lessons learned around effective models of technical support undertaken by FFI in other regions of the world, FFI proposes replicating a model it uses in Egypt and India by placing one staff person in one or two countries (e.g., one staff person would be responsible for the country in which they were physically located in addition to one additional neighboring country based on stage of country program status). Instead of setting up permanent offices in each country, FFI proposes leveraging existing networks of partners and government to host staff and/or cost-share office space to ensure a nimble and efficient team.



Photo: Xaume Olleros/RTI

OBJECTIVES

The objective of the Final Sprint is three-fold:

1. **Engage high-impact, feasible opportunities.**

Implement a focused model that can effectively scale fortification programming across countries on the continent that have demonstrated need and feasibility by leveraging FFI's deep technical know-how and connections particularly in the areas of regulatory monitoring, private sector support and innovative business models, and civil society engagement;

2. **Apply focused resources.** Complement already-existing partner support to programs by dedicating resources that are solely responsible for guiding fortification activities in the countries;

3. **Build in sustainability.** Embed a sustainability component across all programs that ensures fortification is built into existing structures. Examples of activities include mentoring government staff to ensure there is capacity after FFI resources leave, incorporating fortification trainings into local universities and/or miller training programs, and advocating for a fortification line item in government budgets for on-going monitoring and meetings.



APPROACH

FFI's country-led model in Africa will focus on applying business principles to support governments and food producers in developing and implementing fortification programs. Recognizing that the needs of each country are different, FFI's work will include everything from facilitating and coordinating initial data collection around determining need for a program, drafting standards, and initiating the mandatory legislation process to developing and leading trainings for millers, inspectors, and civil society; helping industries plan facility upgrades; drafting national policies; and supporting the creation of a strong regulatory monitoring framework.

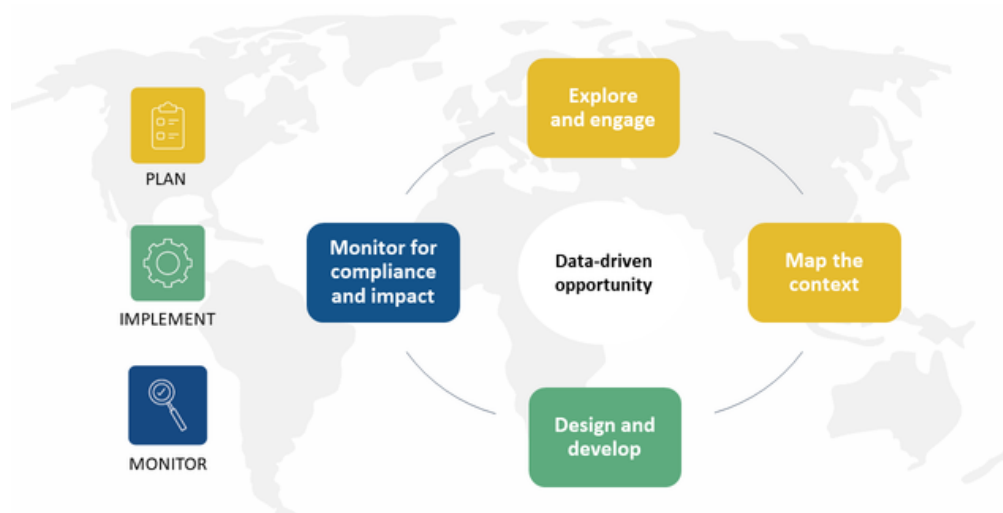
In-country staff members will provide support to government policymakers, captains of industry, and decision-makers on a daily basis. In this capacity, FFI staff will serve as catalysts, spurs, and conveners for governments, food producers, and civic society to ensure focus continues to be placed on fortification program activities throughout the entire design, implementation, and monitoring process.

In support of the Final Sprint, FFI Headquarters will provide both a program of training and a reservoir of technical expertise and templates to hired staff.

FFI's approach will center around FFI's articulated 2020 Strategic Phases of Fortification: FFI provides technical assistance to governments, regional bodies, food producers, and implementing agencies to plan, implement, and monitor fortification of industrially milled wheat flour, maize flour, and rice.

We approach our work around the world by first determining a data-driven opportunity. Once an opportunity is determined, we then use a four-stage phased approach to plan, implement, and monitor fortification programs that save lives.

Strategic Phases of Fortification



COUNTRY SELECTION CRITERIA

Countries will be chosen based on their desire and willingness to have this kind of focused assistance and will be based on the results of FFI's data-driven strategic process, which outlines fortification program status, need, feasibility, and political willingness on the continent.

FFI proposes support for 43 countries in Africa. These countries were chosen based on input from FFI's current Smarter Futures work activities on the continent, priority countries identified through FFI's [2018 Africa Strategy Refresh](#), and priority countries identified in FFI's [West Africa Rice Strategy](#). Country pairings for staff are based on geographic locations and to maintain a combination of monitoring and support countries with countries that are just beginning to introduce or scale up fortification.

Countries identified will need to be reviewed at time of funding and project implementation in light of 1) changing industry structure, consumption patterns, and/or nutritional needs; 2) current political environment including political stability; and 3) available funding.

ANTICIPATED IMPACT

Potential cases of anemia averted among women of reproductive age (WRA) and potential neural tube defects (NTDs) prevented have been estimated for each of the target countries based on a core set of data.

Assuming there is full coverage of adequately fortified products (wheat flour, maize flour, and/or rice), the number of cases of anemia averted in WRA across the identified 43 countries would be 28,427,451 and the number of NTDs prevented would be 57,315 per year [6].

However, this assumes the ideal scenario of optimal (full) coverage and adequately fortified products. Since FFI understands that the ideal scenario may not come to fruition in every country, we believe a more realistic impact assessment should be considered. To that end, we have used a conservative estimate that assumes 75% of the ideal scenario. **Our conservative impact potential estimates averting 21,320,588 cases of anemia among WRA and 42,986 NTDs per year [6].**

Potential Cases of Anemia and NTDs Prevented Through the Final Sprint

Country	Total Potential Cases of Anemia Averted	Potential NTDs Prevented
Algeria	927,179	1,404
Angola	3,097,556	1,886
Benin	364,775	619
Botswana	43,633	101
Burkina Faso	626,472	1,405
Cameroon	536,494	357
Cape Verde	14,119	29
Comoros	16,604	21
Congo	178,866	260
Cote d'Ivoire	777,121	1,249
Djibouti	17,570	45
DRC	2,710,248	5,202
Egypt	2,089,588	4,404
Eritrea	113,745	178
Eswatini	26,033	54
Gabon	68,855	101
Gambia	68,855	194
Ghana	1,097,985	1,183
Guinea	406,441	674
Guinea-Bissau	55,690	674
Kenya	811,102	1,923
Lesotho	29,113	102
Liberia	157,667	225
Madagascar	556,423	688
Malawi	347,474	650
Mauritania	108,507	264
Mauritius	18,797	11
Morocco	801,996	1,351
Mozambique	887,692	578
Namibia	54,015	126
Niger	657,207	1,937
Nigeria	6,100,726	20,070
Rwanda	220,826	313
Sao Tome & Principe	5,836	11
Senegal	614,368	1,480
Sierra Leone	231,251	563
South Sudan	No data	No data
Sudan	683,554	2,290
Tanzania	1,480,891	2,021
Togo	193,009	460
Tunisia	219,572	299
Uganda	757,817	1,302
Zimbabwe	251,783	612
TOTAL	28,427,451	57,315
Revised conservative estimate based on 75% of total	21,320,588	42,986

In addition to reducing iron and folic acid deficiencies, food fortification has the potential to provide other essential micronutrients that are often lacking in diets on the continent such as zinc; vitamins B1, B2, B3, and B12; vitamin A; and, in countries where there is low exposure to sunlight, vitamin D. These nutrients strengthen immune systems, reduce the risk of deadly childhood diseases, prevent the loss of sight, and promote health at every life stage.

MEASUREMENTS OF SUCCESS

FFI will use the following metrics, which are both practical and economic, to serve as accurate markers for success.

1. The creation of standards and/or the passage of legislation that empowers an agency with the authority to mandate, monitor, and enforce food fortification standards.
2. The creation of standards that are in line with national needs taking into account nutritional deficiencies, food consumption patterns, other micronutrient interventions, regional standards, and global recommendations on fortificant forms.
3. Food producers fortifying their products and, subsequently, food producers fortifying their products in line with national standards.
4. The establishment of a regulatory monitoring system and/or a means by which to obtain or infer national compliance data.
5. Data that demonstrates national level of compliance.
6. A sustainable economic strategy that does not rely on external financial support to effectively continue the program (e.g., a national budget line item for fortification or alternative economic strategy).
7. Where there is an opportunity to leverage existing data, demonstrate change in the micronutrient health of the target population as measured using various biological markers.

BUDGET

US\$ 3,263,000 per year or US\$ 13,052,000 for four years.

The budget includes travel for all relevant staff, in-country stakeholder meetings, external professional services, trainings/assessments, a placeholder for potential shared office space fee (assumes FFI shares office space with government and/or partners in country), and office supplies. The budget also includes four specific cross-cutting activities: 1) country-specific trainings for civil society organizations to create demand for fortified products, 2) inclusion of fortification-specific trainings in university and/or milling school curriculum 3) high-level

advocacy meetings to engage with policymakers at regional level three times per year in rice-focus countries, and 4) the hiring of four rice supply chain consultants to complete analyses for Pakistan, India, Viet Nam, and Thailand (countries that export rice to Africa).

10% indirect costs are included. See [detailed budget](#) for more information. Budget assumptions:

- Country Coordinators live in a primary country of operation and, on average, travel four times per year to secondary countries for a duration of two weeks per trip.
- Cost per trip will need to be modified in the budget once countries are identified depending on the cost to travel between the two countries and cost to eat, sleep, and get around.
- Until exact countries are known, the budget assumes a training or assessment (US\$ 20,000) and the need for professional services (US\$ 15,000) in half of the countries. These numbers will need to be revised once unique country needs are determined.

STAFFING STRUCTURE

Full-time employees and benefits under this budget include: 21 Country Coordinators, 2 Regional Managers, 2 Technical Leads, and 1 Project Coordinator for Africa. Support staff include FFI's Director, Deputy Director/Africa Director, Communications Coordinator, Program Coordinator (for FFI general operations), and Senior Nutrition Scientist.

Country Coordinators will be individuals with the following skills:

- Experience in their countries of assignment including specifically working with governments and/or food producers,
- Experience managing or coordinating national programs, and
- Technical skills in fortification and/or nutrition are a 'nice to have' but not a requirement.

The Regional Managers will be responsible for overseeing general operations and technical aspects in each country program and managing each of the Country Coordinators.

The Technical Leads will be responsible for providing strong technical backstopping for each supported country and Country Coordinator. These individuals will be responsible for completing thorough landscape analyses, mill assessments, review of strategy documentation, and/or policy drafting. The Technical Leads will serve to complement the skills of the Country Coordinators, who are not required to have this level of technical ability; instead, Country Coordinators are expected to be well-versed in working through the politics and bureaucracy of national governments.

The Program Coordinator for Africa will be responsible for maintaining and tracking all Africa program budgets, contracts, and grant reporting requirements.

The Africa Director will be responsible for managing Regional Managers and Technical Leads, supporting Regional Managers on technical programming aspects, identifying new countries and/or areas of support in collaboration with Africa-based staff, overseeing staff changes, identifying opportunities for organizational growth, and attracting additional funding.



Photo: RTI

FFI'S COMPARATIVE ADVANTAGE

FFI is uniquely poised to take large-scale fortification programming across the finish line in Africa. Over the course of nearly 20 years working across the globe, FFI has distilled lessons learned from its programs and partners to hone the strategy behind the Final Sprint. Many organizations in the fortification space have multiple programs and competing priorities. Yet FFI finds a comparative advantage in its lean organization, engagement of local expertise for specific goals, and single-minded focus on cereal grain fortification. Unlike other fortification programs in Africa, FFI will achieve the Final Sprint through staff solely dedicated to working alongside the government, private sector, and civic groups to build a sustainable fortification program from start to finish.

[1] Global Fortification Data Exchange. Fortification Legislation. Accessed 01 January 2022. <http://www.fortificationdata.org>

[2] Kancherla V, Chadha M, Rowe LA, Thompson A, Jain S, Walters D, Martinez H. Reducing the burden of anemia and neural tube defects in low- and middle-income countries: An analysis to identify countries with an immediate potential to benefit from large-scale mandatory fortification of wheat flour and rice. *Nutrients* 2021, 13, 244. <https://www.mdpi.com/2072-6643/13/1/244/pdf>

[3] Mkambula P, Mduduzi MNN, Rowe LA, Sablah M, Friesen VM, Chadha M, Osei AK, Ringholz C, Vasta FC, Gorstein J. The unfinished agenda for food fortification in low- and middle-income countries: quantifying progress, gaps and potential solutions. *Nutrients* 2020, 12, 354. <https://www.mdpi.com/2072-6643/12/2/354>

[4] Rowe LA. Addressing the fortification quality gap: A proposed way forward. *Nutrients* 2020, 12, 3899. <https://doi.org/10.3390/nu12123899>

[5] Bobrek KS, Broersen B, Aburto NJ, Garg A, Serdula M, Velázquez FB, Wong EC, Pachón H. Most national, mandatory flour fortification standards do not align with international recommendations for iron, zinc, and vitamin B12 levels. *Food Policy*, 2020. <https://doi.org/10.1016/j.foodpol.2020.101996>

[6] Food Fortification Initiative. Potential anemia and neural tube defects averted through fortification of wheat flour, maize flour, and rice. Unpublished estimates. 2021. <https://www.dropbox.com/s/yienzfx47uyqj4/Calculating%20Global%20Impact.xlsx?dl=0>

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