

SMARTER FUTURES

15 YEARS OF IMPACT

WHAT MAKES SMARTER FUTURES UNIQUE?

“Smarter Futures brings relevant fortification stakeholders together to collectively identify gaps, craft solutions to close gaps, and ensure greater alignment of efforts for the Africa region.”
-Manpreet Chadha, Nutrition International

“Addressing global micronutrient deficiencies through flour fortification requires active involvement by public-private-civic partnerships like Smarter Futures.”
-Dr. Sylvia Roozen, International Federation for Spina Bifida and Hydrocephalus

“Smarter Futures facilitates discussion and coordination that leads to impact by providing a forum for most organizations working on food fortification in Africa, including the private sector.”
-Leo Schulte-Vennbur, Mühlenchemie

From 2007-2021, the Smarter Futures program helped make fortification of wheat flour, maize flour, and rice a reality in dozens of countries across Africa. A unique public-private-civic partnership, Smarter Futures convened key stakeholders and provided technical support to grain millers, governments, vitamin and mineral suppliers, international organizations, and academic institutions. The partnership helped create robust fortification programs that will continue to prevent debilitating health consequences of vitamin and mineral deficiencies, such as neural tube birth defects, impaired learning capacity, and decreased productivity, for years to come.

SMARTER FUTURES' UNIQUE MODEL



PUBLIC SECTOR

Agencies of the United Nations, government agencies and other national entities, non-governmental organizations and academic organizations



PRIVATE SECTOR

Millers, equipment and flour-product companies, wheat traders, baking organizations, and other affiliated businesses



CIVIC SECTOR

Patient, parent, and professional organizations representing the civic domain

Tremendous progress has been made across Africa since Smarter Futures began. In 2007, only seven countries on the continent had legislation for mandatory or voluntary fortification of a grain [2]. 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 on the continent [2]. 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.

Smarter Futures partners include the Global Alliance for Improved Nutrition (GAIN) and International Federation for Spina Bifida and Hydrocephalus (IF) as project holders, the Food Fortification Initiative (FFI) as the main implementing partner, and steering team members: Bühler, Helen Keller International (HKI), Mühlenchemie, Nouryon (formerly AkzoNobel), Nutrition International (NI), the World Food Programme (WFP). Funded by the Ministry of Foreign Affairs of the Netherlands, Smarter Futures did not itself invest large program resources but instead supported and strengthened the efforts of its network partners.

BY THE NUMBERS

723 M

people reached [1]

26

countries provided with specialized support

27

trainings and stakeholder meetings convened

29

countries with mandatory grain fortification

\$5.9 M

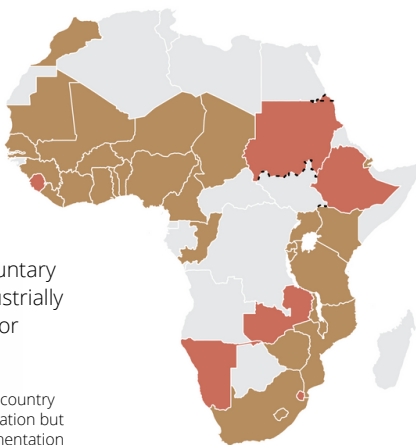
USD total budget over 15 years

MANDATORY AND VOLUNTARY FORTIFICATION OF WHEAT FLOUR AND MAIZE FLOUR IN AFRICA, 2022

Country has legislation to mandate fortification of wheat flour alone or in combination with maize flour [2].

Country allows voluntary fortification of industrially milled wheat flour or maize flour [2].

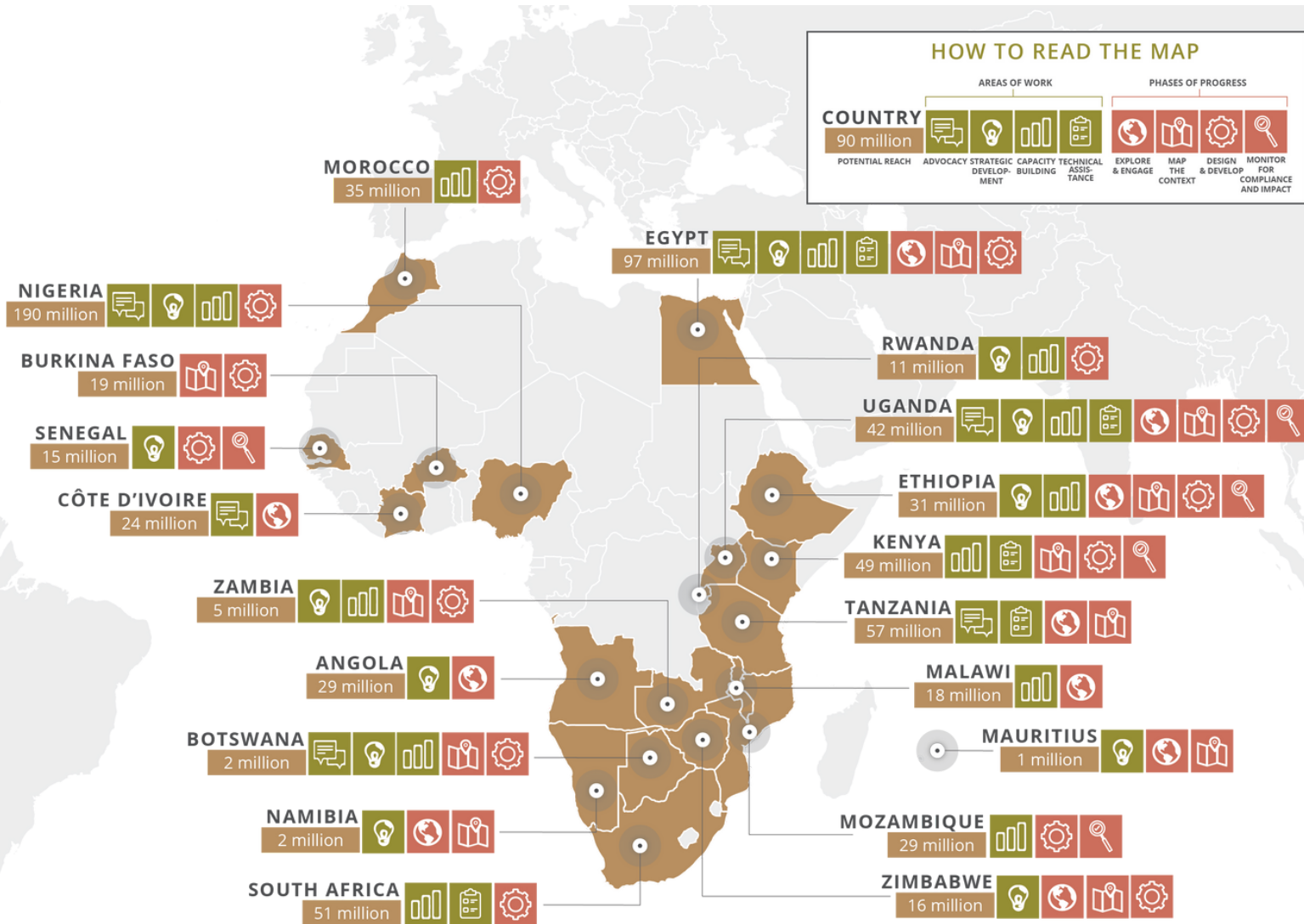
Map includes Namibia, a country that has voluntary fortification but does not have the documentation required to be included in the dataset that populates this map.



[1] 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/yienzfmx47uyqj4/Calculating%20Global%20Impact.xlsx?dl=0>

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

Providing Specialized Support



Note: In addition to the countries above, Smarter Futures provided assistance in developing standards that led to millers fortifying flour in the following countries: Algeria, Congo, Ghana, Lesotho, Sudan, and Tunisia.

Potential reach calculated using the following source: 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/vienzfmx47uyqj4/Calculating%20Global%20Impact.xlsx?dl=0>

AREAS OF WORK

<p>ADVOCACY</p> <p>Advocacy by IF parent associations and associated experts such as neurosurgeons has been shown to be particularly effective with millers, who often do not know why they should fortify. Advocacy is also provided to Ministers of Finance and Economic Affairs on the cost and the benefit of fortification to ensure their willingness to invest and reduce taxes on imports of premix.</p>	<p>STRATEGIC DEVELOPMENT</p> <p>Developing and expanding strategies for grain fortification using the African Maize Fortification Strategy and the Rice Fortification Feasibility study for Africa completed in 2016.</p>	<p>CAPACITY BUILDING</p> <p>Building capacity for quality assurance and quality control (QA/QC) and developing and disseminating suitable tools for effective implementation and monitoring.</p>	<p>TECHNICAL ASSISTANCE</p> <p>Providing technical assistance to address pressing roadblocks in implementation at the country level.</p>
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PHASES OF PROGRESS

<p>PHASE 1</p> <ul style="list-style-type: none"> Engage private sector, birth defects groups, neurosurgeons, and consumer associations Identify key challenges and opportunities Identify a champion/champions within government Determine what it will take to move forward 	<p>PHASE 2</p> <ul style="list-style-type: none"> Conduct a thorough supply chain analysis Assess industry structure including readiness and reach of mills Assess monitoring structure and needs Map the legislative process Assess budgetary needs (initial investment by sector and annual recurring costs) to ensure commitment and sustainability If necessary, conduct a cost-benefit analysis making the case for fortification's impact on national health and economic indicators 	<p>PHASE 3</p> <ul style="list-style-type: none"> Draft recommended standards Identify miller, regulatory inspector, and laboratory training needs Support premix procurement process Engage the legislative process Develop a communication and education strategy Integrate realistic fortification monitoring into existing framework Train millers on QA/QC practices Train regulatory monitoring inspectors and lab staff; map agency responsibilities Facilitate the passage of legislation Develop a National Fortification Guidelines document and national logo, as necessary 	<p>PHASE 4</p> <ul style="list-style-type: none"> Support collection of monitoring data Ensure monitoring data is shared with relevant stakeholders Augment government monitoring partnerships with civic entities Ensure action is taken to improve program performance based upon monitoring data As relevant, partner with stakeholders to measure impact
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Providing Specialized Support

In collaboration with partners, Smarter Futures provided specialized support to 26 countries in Africa. Support was provided through four areas of work: Advocacy, Strategic Development, Capacity Building, and Technical Assistance. By working in these areas, the Smarter Futures team assisted countries in the creation and/or scaling-up of a large-scale food fortification program through four phases: Phase 1 - Explore and Engage, Phase 2 - Map the Context, Phase 3 - Design and Develop, and Phase 4 - Monitor for Compliance and Impact. In addition to the countries listed below, Smarter Futures provided assistance in developing standards that led to millers fortifying flour in the following countries: Algeria, Congo, Ghana, Lesotho, Sudan, and Tunisia.

COUNTRY	PERIOD	OUTCOME
<u>Angola</u>	Q1-Q4 2020	Creation of a detailed workplan involving planning, implementation, and monitoring
<u>Botswana</u>	2013	Development of national fortification action plan and standards; evaluation of the potential for fortification of sorghum flour
<u>Burkina Faso</u>	2018-2019	Acceleration of the process of surveillance and food inspection along key borders
<u>Egypt</u>	2009-2010	Technical support on flour fortification, covering training, advocacy, technical advice on mill QA/QC, food control inspections, and product analysis
	Q2 2019-Q4 2021	Creation of flour fortification committee, legal assessment, national monitoring guidelines, and an advocacy video
<u>Ethiopia</u>	2009-2010	Development of a national fortification strategy, action plan, and cost benefit analysis
	2013	Development of a training manual for public sector staff, awareness training, and review of national action plan
	Q1 2019	Collection of sufficient monitoring data and conducting appropriate testing to improve compliance
<u>Côte d'Ivoire</u>	2018-2019	Fortification alliance formalized
<u>Kenya</u>	2013	M&E, enforcement, and Phase 2 support for medium-scale millers; industry mapping of maize fortification
<u>Malawi</u>	2019	Food monitoring and compliance workshop and media strategy implementation
<u>Mauritius</u>	2013	Revised action plan for financing by government, technical support for food fortification with SADC
	2021	Built foundation for mandatory fortification of flour
<u>Morocco</u>	Q4 2020-Q4 2021	Improved miller compliance to national fortification standards
<u>Mozambique</u>	Q2-Q4 2020	Monitoring and surveillance on national fortification program, rollout of Fortify MIS
<u>Namibia</u>	2013	Draft strategy for national fortification with a particular focus on regulatory monitoring
	2021	Anticipated: revision of South Africa's fortification standards to be established as the standard in Namibia
<u>Nigeria</u>	2013	IF, FFI, and local partners organized an advocacy event on the care and treatment for children with spina bifida
<u>Rwanda</u>	2013	Passing of standards for fortified foods by Minister of Trade
<u>Senegal</u>	2021	Planning for a national fortification micronutrient survey
<u>South Africa</u>	2016	Adoption of sodium iron EDTA as a new iron fortificant in South Africa
	Q1 2019-Q4 2020	Development of tools and training to operationalize South Africa's Monitoring Implementation Guidelines
<u>Tanzania</u>	2013	Launch of national large-scale food fortification program
<u>Uganda</u>	2009-2010	Numerous advocacy events and workshop for Ugandan Parliamentary Forum for Children
	2013	Review of mandatory industrial assessment for fortification
	2019	Training on basic protocols and principles for market sampling and analysis of fortified foods
	2021	Rapid mill assessment on the impact of COVID-19 on large-scale food fortification
<u>Zambia</u>	2021	Anticipated: development of the mandatory standard and passing of mandatory flour fortification
<u>Zimbabwe</u>	2013	New partnership with PHC
	Q1-Q4 2021	Anticipated: provide salary for government-based consultant for one year and support standards finalization and adoption

M&E: Monitoring and Evaluation, PHC: Project Healthy Children, QA/QC: Quality Assurance/Quality Control, SADC: Southern African Development Community

Training and Convening Stakeholders

Over the course of 15 years, Smarter Futures convened 27 trainings and collaborative meetings that were attended by stakeholders from 41 African countries. These trainings and meetings covered topics including micronutrient nutrition and fortification program planning, implementation, monitoring, and advocacy.

DATE	EVENT	TOPIC	TARGET AUDIENCE	PURPOSE
November 8-9, 2007	European Meeting on Mandatory Flour Fortification	Advocacy	Regional and international organizations	Regional collaboration
November 17-20, 2008	1st African Flour Fortification Initiative Workshop	Advocacy	Regional and international organizations	Regional collaboration
June 2-3, 2009	Flour Fortification Initiative Partners Meeting	Advocacy	Regional and international partners	Regional collaboration
December 7-10, 2009	Training of Trainers and Training of Milling Staff and Regulatory Staff	Monitoring	Millers and regulatory officials	Training
April 19-22, 2010	Standards Harmonization Workshop	Nutrient deficiencies	SADC member states	Regional collaboration
November 26, 2010	2nd African Flour Fortification Initiative Meeting	Advocacy	Regional and international partners	Regional collaboration
April 4-8, 2011	QA/QC - Monitoring and Surveillance of Flour Fortification Programs	Monitoring	Program managers	Training
March 4-7, 2013	FORTIMAS: Fortification Monitoring and Surveillance	Monitoring	Government/scientific leaders and international partners	Training
November 5-8, 2013	International Association of Operative Millers Mideast and Africa District Conference and Expo	Iron detection and measurement	Millers	International collaboration
December 10-14, 2013	Cost and Economic Benefit Training Workshop	Planning	Government ministries, milling companies, international organizations, and patient representatives	Training
December 10, 2013	Africa Network Meeting	Preventing NTDs	Public, private, and civic sector partners	Regional collaboration
May 12-15, 2014	Regional Workshop on QA/QC for Countries in North Africa	Monitoring	Public sector agencies and flour milling industries	Training
December 2-3, 2014	Celebrating and Equipping Progress Through Partnerships	Advocacy	Government representatives, milling executives, and international partners	International collaboration and awareness
March 2-6, 2015	Intermediate Congenital Anomalies Surveillance Workshop	Monitoring	Health professionals in African countries	Training and workshop
May 11-14, 2015	Training Workshop on QA/QC for Flour Fortification	Monitoring	Flour millers, government food control, and nutrition staff	Training
December 17-18, 2015	Lunch Seminar: Smarter Futures	Advocacy	Public and private partners of the Dutch Ministry of Foreign Affairs	International collaboration
2015	Training Workshop on Lifelong Care	Advocacy	Caregivers, civic advocacy organizations, and patient representatives	Training
May 22-28, 2016	Training Workshop on QA/QC	Monitoring	Food industry, universities, government nutrition and regulatory staff from Ministries of Health, Trade, and Industry	Training
June 2016	FORTIMAS: Fortification Monitoring and Surveillance	Monitoring	Flour millers, government food control, and nutrition staff	Training
October 3-7, 2016	Maize Fortification Strategy Meeting	Maize fortification	NFAs, millers, regulatory bodies, regional economic/health bodies, NGOs, donors, premix suppliers, and industry partners	Regional collaboration
May 15-19, 2017	Training Workshop on QA/QC	Monitoring	Flour millers, government food control staff, and NGO staff from 8 African countries	Training
July 24-28, 2017	Eastern and Southern Africa Training of Trainers	Planning, implementing, and monitoring	Trainees from a variety of professional backgrounds, representing 11 countries	Training
October 8-10, 2018	SADC Regional Capacity Building Workshop on Strengthening Food Fortification Programs: Monitoring and Surveillance Systems	Regulatory monitoring and advocacy	National representatives from food control, lead government ministries, the private sector, and patient representatives from SADC member states	Regional collaboration

NFA: National Fortification Alliance, NGO: non-governmental organization, NTD: neural tube defect, SADC: Southern African Development Community

DATE	EVENT	TOPIC	TARGET AUDIENCE	PURPOSE
2019	IF Global Prevention Initiative Clinics	Advocacy	Governments, international organizations, health services, health professionals, and individuals	International collaboration and awareness
August 3-September 28, 2020	Monitoring Challenge Workshop: Identifying Innovative and Effective Means of Strengthening Fortification Program Monitoring Using Existing Resources	Regulatory monitoring	Government, private sector, and civil society stakeholders from countries with mandatory fortification programs in place that are struggling to implement effective monitoring frameworks	Regional collaboration
2020-2021	IF Advocacy Workshop	Advocacy	Patient, parent, and professional organizations representing civic domain	Training
April 1, 2021	Training Seminar for Millers to Build Capacity in Egypt's Milling Sector	Planning, implementing, and monitoring	Public and private millers, national government players, and external partner support stakeholders	National collaboration

Resources to learn more about the need and opportunity for fortification in Smarter Futures countries:

- [Global Fortification Data Exchange](#)
- [PUSH! Global Report Card](#) for Spina Bifida and Hydrocephalus Prevention and Care

Selected Smarter Futures Publications and Resources

- [Africa Maize Fortification Strategy](#) (2017)
- [Cost:Benefit Tool](#): Assists countries in comparing the estimated cost of implementing a national fortification program to the benefits the program will generate in return (2013)
- [Fortify Grains to Prevent NTDs in Africa](#) (2013)
- [FORTIMAS](#): Approach for tracking the population coverage and impact of a flour fortification program (2014)
- [Monitoring Framework Shell](#): Template that allows countries to add unique context with pre-filled general recommendations and processes (2021)
- [Regulatory Monitoring of National Food Fortification Programs](#): Policy guide that proposes a standardized, feasible approach to determining fortification compliance and offers country-specific examples for addressing common, ongoing challenges faced by public and private sectors (2018)
- [Smarter Futures Brochure](#) (2021)

