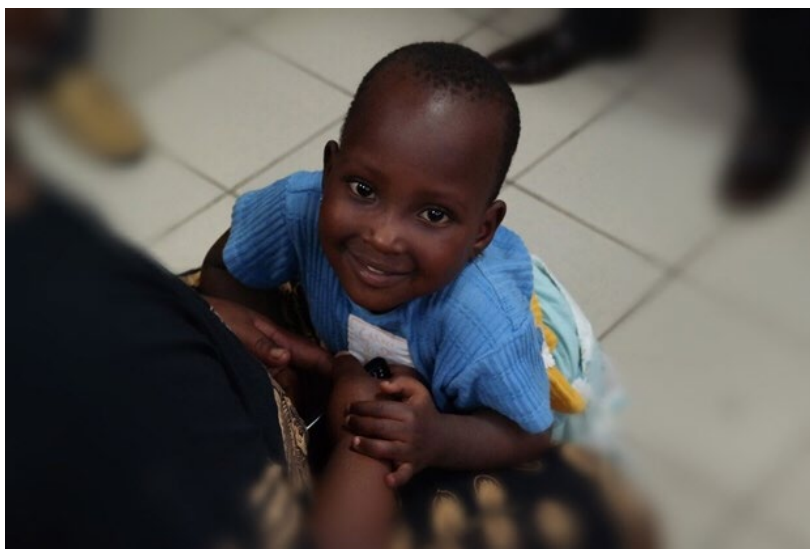


Pull Strategy Overall Implementation Report

Uganda and Malawi



Child with spina bifida at the Plaster House rehabilitation centre near Arusha, Tanzania, in September 2015. Photo by Godwin Bamsa.

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Enhancing Grains for Healthier Lives



INTERNATIONAL
FEDERATION
for
SPINA BIFIDA
and
HYDROCEPHALUS

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Acronyms

AVSI	Association of Volunteers in International Services
CAMA	Consumer Association of Malawi
CBO	Community Based Organization
CONSENT	Consumer Education Trust
CSONA	Civil Society Organization- Nutrition Alliance
ECSA-HC	East, Central and Southern Africa Health Community
FBO	Faith Based Organization
FRA	Food Rights Alliance
GAIN	Global Alliance for Improved Nutrition
KCCA	Kampala City Council Authority
LSC	Life Sciences Consult
MOH	Ministry of Health
MoIT	Ministry of Industry and Trade
NFA	National Fortification Alliance
NGO	Non-Government Organization
NUSU	Nutrition Society of Uganda
OURS	Organized and Useful Rehabilitation Services
PASHL	Parents Association for Spina Bifida and Hydrocephalus
QA/QC	Quality Assurance/Quality Control
QECH	Queen Elizabeth Central Hospital
SBH	Spina Bifida and Hydrocephalus
SHAU	Spina Bifida and Hydrocephalus Association of Uganda
SHYNEA	Spina Bifida and Hydrocephalus Awareness Network Uganda
SUN	Scaling Up Nutrition
UCPA	Consumer Protection Association
UNICEF	United Nations International Children Fund
VAD	Vitamin A Deficiency

1 Introduction to Pull Strategy

1.1 Background

Where countries are implementing mandatory fortification, the population's awareness of fortified foods has been found to be limited. Civil society organizations (CSOs) such as consumer organizations and disability groups have been identified as key stakeholders for improved outcomes of fortification programmes.

Pull strategy is an approach whereby disability groups, consumer associations and relevant civil society organizations advocate to government for improved enforcement and compliance by industries to fortification standards, while creating awareness to the general population on the importance of fortified foods. Consumer organizations and disability groups have been identified by the Global Fortification Technical Advisory Group as key stakeholder groups for improved outcome of fortification programmes.

Consumer associations are legally registered organizations that speak on behalf of the general public and undertake consumer education and social marketing of fortified foods across the countries. Disability groups are mainly groups of parents of children with spina bifida and hydrocephalus. They provide healthcare and support to the affected children; economic empowerment of households and children; and psychosocial support to each other. Civil society organizations with a nutrition focus engage in fortification advocacy and civic education.

1.2 Aims and Objectives

The pull strategy aims to support appropriate fortification delivery by addressing the issue of inadequately fortified foods as well as fraudulent labelling claims by manufacturers. It is intended that the increased engagement by consumer organizations and disability groups will raise awareness on consumers' right to essential minerals and vitamins through fortification.

The objectives are three-fold:

- (i) Support civil society, consumer organizations and disability groups to engage in commercial monitoring of fortified foods
- (ii) Raise awareness on the health burdens associated with malnutrition such as spina bifida, anaemia, visual impairments; micronutrient deficiencies as major health burden; consumers' right to essential minerals and vitamins through fortification; inadequately fortified foods; and fraudulent labelling claims by industries

- (iii) Ensure industries are held accountable for inadequate fortification and government enforces regulation.

1.3 Rationale for Pull Strategy

Government market assessments are often comprehensive, costly and time-consuming, and reports not made public. Commercial monitoring by civil society is basic, less costly, and provides quick information on fortified foods in the market. As Uganda and Malawi both include multiple nutrients in their fortification standards, this report highlights the importance of folic acid (vitamin B9) intake as it reduces the risk of children being born with birth defects of the brain and spine such as spina bifida and anencephaly. The parent groups engaged in the pull strategy will be passionate about preventing these birth defects through increased consumption of staples foods fortified with folic acid. If the pull strategy is successful, the population will increase their intake of all nutrients included in fortified foods.

1.4 Methodology

The pull strategy for Malawi and Uganda was implemented in a phased and participatory manner with the consumer associations, civil society organization and disability groups fully engaged.

Phase 1: Land scape analysis

The landscape analysis of consumer associations and disability groups/parent associations and developing engagement strategy with these associations/groups with key channels/audiences for advocacy was done.

Data was collected two ways:

Online/Desk Review: A large part of the desk review covered information available on existing consumer associations and disability groups and the policy environment for their operations in both Uganda and Malawi.

Key Informant Interviews: Key informant interviews were held with leaders of consumer associations and disability groups to understand their mandates and roles in nutrition security and control of micronutrient deficiencies. It was also discussed how they undertake advocacy and lobbying on nutrition security, capacity to plan and undertake simple market assessment, who their audiences are and how they engage them. Their views on how to package advocacy messages to their audiences, including a media strategy, is also important.

Phase 2: Advocacy and Capacity Building

This phase involved holding advocacy workshops for consumer and disability groups and training them on basic market assessment using tools developed.

Under this phase, laboratory test kits were procured and provided to two laboratories (LifeScience Consult in Malawi and Makerere University laboratory in Kampala, Uganda) to support monitoring market assessments.

Phase 3: Sampling and Analysis

Sampling

The trained market assessment teams were deployed to the sub-national regions or districts in the two countries to collect samples of fortified foods for testing in the laboratories. The following protocol was used for the sampling:

- Sample all available fortified oil/wheat flour/maize meal types/brands in the market (produced in country or imported)
- Differentiate samples based on manufacturer, food type, brand, batch number and sampling site/location. These sites include wholesalers, retail shops, weekly village markets and kiosks for every fortified food product. These are the points where the majority of the population purchases these foods.
- Use clean and dry apparatus for sampling to avoid contaminating the samples.
- Do not take samples from a place where they might have been exposed to light, heat, other foods and moisture.
- Protect samples (the food products) and containers for samples from adventitious contamination by using suitable, clean and dry containers.
- Store samples in such a manner that they are protected from light, temperature fluctuations and other abnormal conditions.
- Fill sample containers of oil so that the air space above the liquid level is 5 to 10% of the capacity of the sample containers, i.e., the sample containers should be almost but not completely filled.
- Fit all sample containers with suitable tight stoppers or tightly tied rope/thread in such a manner that it is not possible to remove the contents and the label without breaking the imprint of the seal.
- Capture details on forms which were used to develop codes in the laboratories.

The actual field sample collection took place in the first week of 30th July, 2018 for Malawi and 1st week of September for Uganda. Three teams were formed to carry out sampling in Blantyre, Lilongwe and Mzuzu cities. Uganda had four teams, each going to one of the four major regions: northern, eastern, central and western.

In each city, three to five markets were chosen. Forty samples for cooking oil of (250ml to 500ml bottle) and twenty samples for both maize and wheat flour (weighing 1 to 2kgs) samples were planned to be collected in each city. Each team was given a sampling form to fill during sample collection.



Sample Testing and Analysis

Each team delivered their samples to LifeSciences in Lilongwe and Makerere University Kampala laboratories in Malawi and Uganda respectively for qualitative and quantitative analysis. Uganda samples were all subjected to qualitative analysis, while only those that tested positive were subjected to quantitative analysis. In Malawi were only a few the samples were collected, all the samples were subjected to quantitative analysis, without qualitative analysis done.

Since this was a basic assessment, aimed at quick and less costly result, i-Checks were procured and provided to the Country Teams for testing. The results are presented in the following section.

2 Key Findings

2.1 Landscape Analysis

A Bird's Eye View of Food Fortification in Uganda and Malawi

In 2011, Uganda put in place a law for mandatory fortification of wheat and maize flours with vitamins and minerals, including folic acid. The Fact Survey of 2016, conducted by the Global Alliance for Improved Nutrition (GAIN), showed 3.4% of maize flour is fortified, 57.9% of edible oil is fortified, and 53.2% of fortified wheat flour in the Ugandan market was within the national standards. It was expected that this situation might have greatly changed over the years. There has been no deliberate action to undertake a national market assessment to ascertain the level of micronutrients in the fortified food in the retail markets. This lack of vital information hinders effectiveness in public awareness creation and advocacy to government and industries.

Malawi passed legislation for mandatory fortification of wheat flour and maize flour in 2015 following mandatory salt iodization which started in 1995. Alongside the legislation, standards were developed in line with the national consumption patterns and the East, Central and Southern Africa- Health Community (ECSA-HC) regional standards to prevent disruptions to trade in the region. Interviews with stakeholders reveal that implementation of mandatory maize flour fortification is lagging behind sugar, wheat flour, cooking oil and salt fortification programs. Industry inspection statistics indicate that 80% of the wheat flour, 80% of cooking oil, 95% of sugar and 5% (which represents 30% of fortifiable) maize flour consumed in Malawi is fortified.

In addition to locally produced fortified edible oil, wheat flour, and maize flour, Uganda and Malawi do import fortified/fortifiable foods. Legislation in the two countries require all imports of these food vehicles to be fortified. The purpose for fortification standards was to have maximum health impact for population. The standards are meant to protect the consumers in ways that they get safe and nutrient-rich products while at the same time assist the producers and importers to meet international market requirements.

Spina Bifida and Hydrocephalus (SBH) status

Hydrocephalus is excessive fluid on the brain that often requires a surgically installed shunt system for treatment; hydrocephalus is common among children with spina bifida. The status of children affected by SBH in Uganda and Malawi has not been highlighted in the different surveys conducted. There is inadequate understanding of SBH, in terms of its causes and prevention, among the general population including health practitioners.

Parents, especially mothers, of children with SBH, face a host of challenges, such as poverty, discrimination from communities and even hospital settings. What is emerging clearly is that the parents and their support organizations such as CURE hospital in Uganda and Queen Elizabeth hospital in Malawi require support to look after these children. However, the pull strategy focusses on preventing further occurrence of SBH, while other programmes handle care and support for the affected children and their parents.

Preventing spina bifida in subsequent child births is an important focus for parent groups. Hospitals provide folic acid supplements to the mothers under their care to prevent spina bifida in future pregnancies.

Consumer Protection Organizations in Uganda and Malawi

The landscape analysis revealed that Uganda and Malawi have strong consumer protection associations. Whereas Malawi has a strong consumer

protection that regulates its operations, Uganda's consumer association operates without consumer protection regulation at all. This hinders the effectiveness of the Uganda consumer association to meaningfully engage the government and private sector in case of complaints. Consumer associations support consumers, government, and other organizations in creating public awareness on matters concerning trade and transaction

Uganda Consumer Protection Association (UCPA) is the national body affiliated with the International Consumer Protection Association. UCPA was established in 1993 and has over 200 individual supporters and two institutional members. The association is engaged in policy advocacy for an environment that enables consumers to exercise their rights by influencing business practices and regulatory activities. Its main activities are promotion of food and nutrition rights, fair trade in goods and services, and effective regulatory conduct by producers and traders.

The Consumer Association of Malawi (CAMA) is a member association but works more as a not-for-profit consultancy organization. It supports consumers, government, and other organizations in creating public awareness on matters concerning trade and transitions. The head office is based in Blantyre.

It is important to note that food fortification and involvement of consumer association in fortification are not new to UCPA and CAMA. What may be new is their involvement in market monitoring of fortified foods which the pull strategy emphasizes. In 2008, UCPA was heavily involved in consumer education to increase intake of micronutrients which became a driving force for fortification through a GAIN grant. Over the years, UCPA's participation in fortification became minimal. The main barrier has been inadequate financial resources to do consistent and continuous consumer education and awareness on the health benefits of consuming fortified foods.

In the beginning of mandatory fortification in Malawi, CAMA spearheaded social marketing among the population under Scaling Up Nutrition (SUN). It took active part in distribution of banners, posters and stickers to the general population with fortification messages. Radio jingles and press releases were also done and fortification logo developed. The logo is in use.

Therefore, the pull strategy offers opportunities for the consumer association to re-engage government and industries through policy dialogue and fortification compliance support. Both UCPA and CAMA have no permanent staff that can be drawn to support continuous market assessment. However, they draw from the pool of members who are capable of market assessment

as well as reporting and dissemination of their results. In pursuit of the pull strategy objectives, UCPA and CAMA draw on technical and financial experts from different professionals in their ranks.

Strength of UCPA and CAMA

- The strength of the consumer associations lies in their experiences in engaging both the civil society and government in a number of issues affecting consumers
- They both have volunteers among its members to undertake market sampling and reporting
- The consumer association have existing relationships with the media, which the pull strategy could leverage to increase awareness to the general population on SBH, benefits of intake of micronutrients and fortification.

Weakness of UCPA and CAMA

The major weaknesses of consumer associations in implementation of the pull strategy are:

- Lack of capacity both in terms of skills and presence of a laboratory to undertake testing and analysis of the samples of fortified foods.
- Whereas the consumer associations have competent members, these members are busy in their own business with limited time that can be devoted for market assessment
- Logistical challenges of lack of vehicles and resources to undertake routine sampling and analysis of fortified foods.

Parents Association for Spina Bifida and Hydrocephalus

Both countries have groups and associations of parents of children with spina bifida and hydrocephalus. Uganda has Spina Bifida Association-Uganda (SHA-U) while in Malawi it is Parent Association for Spina Bifida and Hydrocephalus (PASHL) all affiliated to International Federation (IF) of spina bifida and hydrocephalus. SHA-U is umbrella association for other small groups in Uganda based in the major subnational regions of Uganda. These include, Cheshire Homes of Kampala, CURE project in Mbale, Organized and Useful Rehabilitation Services (OURS) in Mbarara, AVSI in northern Uganda and Spina Bifida and Hydrocephalus Awareness Network Uganda (SHYNEA) in Kampala.

While in Malawi, PASHL has no affiliate groups but has 350 members across the country. Among the members are professional people who have been keen to use their experience and lessons to educate others on the importance of

preventing the prevalence of SBH in the communities. It has a board of governance that manages the day-to-day affairs of the association.

The major functions of the associations are to provide social support, health care and rehabilitation of the children and psychosocial support to both the children and parents to cope with the challenges of SBH in the family. They provide economic support through cooperative business development and management. For example, they have formed savings and loan schemes and cooperative businesses.

In both countries, the parents' associations had heard of fortification and importance of the micronutrients, especially folic acid and iron, but have been looking for ways of getting more knowledge and promoting intake of folic acid and iron. The pull strategy provided perfect opportunities for them to achieve their goals.

Civil Society Organization

In each of the countries, one prominent nutrition focused civil society organization was identified to provide support to the consumer association and parent associations in dissemination of the market assessment reports. In Uganda, the Nutrition Society of Uganda (NUSU), a civil society organization of nutrition and dietetic professionals, based in Makerere University, School of Nutrition, Food Science and Bioengineering, agreed to participate in the pull implementation. The organization was formed and registered in 1995 as Uganda Action for Nutrition (UGAN) Society. In early 2018 it was renamed and reregistered as NUSU, in tandem with similar organizations globally. The main goal of the NUSU is to advocate for better nutrition and sustainable development. NUSU undertakes research in nutrition and food science and disseminates the results widely throughout the country.

In Malawi Civil Society Organization Nutrition Alliance (CSONA) was identified to support CAMA and parent associations in providing a platform to share market assessment reports. CSONA is an alliance of civil society organizations with stakes in nutrition in Malawi. It started about five years ago with membership from international, national, community, and faith-based organizations. The alliance does not directly implement nutrition programmes such as supporting fortification, but some of its member organization do.

Stakeholder Analysis for Pull Strategy Implementation

This section highlights the key stakeholders in implementation of the pull strategy in Uganda and Malawi. The table below summarizes information on the key actors, their roles, their stakes and how they were engaged. The pull

strategy was geared towards participation of relevant civil society organizations who have not largely been involved in the conventional programmes and activities of fortification in countries.

Actors	Roles	Stakes	How to Engage
Consumer Protection Associations (UCPA & CAMA)	<ul style="list-style-type: none"> ○ Coordinate other civil society organizations to participate in advocacy workshops. ○ Lead teams of consumers and parents' association to carry out basic market assessment. ○ In conjunction with parents' associations develop media strategy to disseminate findings ○ Link up with National Alliance to disseminate the findings of the market assessment. ○ Earmark resources to carry out routine yearly market assessments. 	<ul style="list-style-type: none"> ○ Consumers are aware of benefits of fortified foods ○ Consumers increase consumption of fortified foods. ○ Fortified food complies with national standards. 	<ul style="list-style-type: none"> ○ Policy advocacy to ensure industries comply with national standards. ○ Lobby government to increase enforcement of the standards.

Actors	Roles	Stakes	How to Engage
Parents associations	<ul style="list-style-type: none"> ○ Community mobilisation and education on the importance of fortification and benefits of consuming fortified foods. ○ Develop media strategy in partnership with respective consumer associations (UCAP & CAMA) 	<ul style="list-style-type: none"> ○ Increased consumption of fortified foods to improve micronutrient (especially folic acid) uptake for the most vulnerable and marginalised groups and communities ○ Empower communities to take charge of their nutritional status 	<ul style="list-style-type: none"> ○ Establish partnership for execution of advocacy programmes in fortification. ○ Networking and information sharing with various actors
Laboratories (MaK and LifeSciences)	<ul style="list-style-type: none"> ○ Receive and store samples from the markets ○ Provide technical support in qualitative spot checks and quantitative tests of samples ○ Undertakes analysis of the results to be handed over to consumer association and parent groups for reporting 	<ul style="list-style-type: none"> ○ Quality control of the data generated ○ The results of the market assessment reach large audience and academic community 	<ul style="list-style-type: none"> ○ Provide sampling analysis to the academic community in Uganda and east Africa ○ Share lab testing and analysis with other stakeholders
Civil Society Organizations (NUSU & CSONA)	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○

Actors	Roles	Stakes	How to Engage
Media	<ul style="list-style-type: none"> ○ Information dissemination and education of the population on benefits of consuming fortified foods 	<ul style="list-style-type: none"> ○ Informed and enlightened population that can appreciate fortified foods ○ Informed and vibrant community that holds its leaders accountable on fortification at all levels 	<ul style="list-style-type: none"> ○ Strategic partnership in packaging and dissemination of the right information to the people

2.2 Advocacy Workshops and Training for Market Assessment

The overall aim of the workshop and training was to empower consumer associations and parent groups to assess if fortified foods are in compliance with the mandatory legislation standards and advocate for improved enforcement of the national legislation and compliance to national standards by industries if non-compliance is observed.

The specific objectives were to:

- Equip consumer association and parent groups with knowledge and skills to undertake step by step procedure for sampling
- Demonstrate how analysis of fortified foods is undertaken and reports generated

The Uganda advocacy target participants included members of Uganda Consumer Protection Association (UCPA), government, Spina Bifida and Hydrocephalus Association-Uganda (SHA-U), the media and Civil Society Organization (CSO). Government staff were drawn from Nutrition Division of Ministry of Health (MoH) where the national food fortification programme is coordinated, Ministry of Trade, Industry and Cooperatives and National Fortification Alliance (NFA). A total of 33 participants attended the advocacy workshop, and subset of 17 people attended the market assessment training. One of the participants was a child with spina bifida whose mother was a participant and could not leave the child at home without a responsible person to take care.

In Malawi, the training started with the advocacy workshop with 25 participants, including guests. A subset of 15 individuals attended the market

assessment training. These were drawn from government, Consumer Association of Malawi (CAMA), Spina Bifida and Hydrocephalus (PASHL), the media and Civil Society Organizations (CSO). Government staff were drawn from the Department of Nutrition HIV/AIDS (DNHA), Ministry of Industry and Trade (MoIT) and National Fortification Alliance (NFA).

Summary of workshop presentations

In these workshops, the nutrition status of Uganda and Malawi were presented to the participants to appreciate the need for industrial fortification. Generally, it was revealed that, although the nutrition indicators such as stunting, wasting and underweight in the two countries were improving, they still pose health burdens to the population.

The participants were also taken through the benefits of food fortification such as (i) Prevention of nutritional diseases such as nutritional anemia, birth defects of brain and spine; (ii) An increase in the body's immune system function; (iii) Best and less costly approach to increasing intake of micronutrients as fortified staple foods reach a large share of the population and (iv) Improves standard of living of people with reduced costs in managing nutritional diseases and improved health of the labor force.

The status of spina bifida and hydrocephalus in Uganda and Malawi were discussed. It was reported that CURE Hospital in Uganda carries 100-120 brain surgeries per month – 5 to 7 per day (1,300+ annually). Among these are 80 hydrocephalus cases. The hospital is well known for the shunt-less ETV/CPC surgery to treat hydrocephalus. The hospital also reported 15 spina bifida cases per month and 10 other neurosurgical cases that include encephalocele, another type of birth defect that can be mostly prevented with adequate folic acid intake.

In Malawi it was observed that there is an increase in the number of new cases of children born with spina bifida from 60 (2009) to 150 (2018) at Queen Elizabeth central hospital (Blantyre-Malawi) and 20 per year at Zomba Central Hospital. The data for other hospitals in Lilongwe and Mzuzu were not included.

The workshop participants stressed the importance of folic acid in preventing spina bifida which is a birth defect of the spine and also called a neural tube defect. Supplementation of folic acid and diet diversity are not likely to result in women achieving the recommended 400 micrograms of folic acid every day because they require behavior change. Food fortification with folic acid is the best way to deal with neural tube defects because it reaches the target group at the right time without requiring them to change their habits.

Market assessment training

A select team of members of the consumer association and parents' groups were then trained on basic principles and steps of sampling, testing and analysis of fortified foods. The aim was to equip them with knowledge and skills to undertake step-by-step procedures for sampling and to demonstrate how analysis of fortified foods is undertaken and reports are generated.

The benefits of commercial monitoring were highlighted as follows:

- ✓ to detect brands that do not comply with national fortification regulations.
- ✓ to confirm whether brands that have previously been inspected in factories and importation sites are indeed fulfilling the requirements along the supply chain.

It was observed that, since data is not shared or is kept confidential by government agencies or departments that monitor food fortification, consumer associations and disability groups need to undertake basic monitoring to assess the level of micronutrients in fortified foods in the market.

This will enable civil society to advocate to the government to enhance enforcement of compliance and reject inadequate fortification and fraudulent labelling claims by industries to the national standards.

Observation and discussions

A number of issues were raised by the participants in the plenary discussions, Salient among them were the following:

- Generally, the consumers' representatives in the training were not aware about food fortification and benefits of purchasing and consuming fortified foods. Even among the participants, less than 20% were aware of what fortification means. Therefore, it was recommended that, communication in regard to fortification must go to all people to understand the need to have properly fortified foods.
- The important role consumer associations and parent's groups can play in advocacy was appreciated. However, it was recognized that for these associations to fully participate, they need to be included in creating fortification policy so they can derive legitimacy for their involvement in fortification

- The participants noted that fortifying industrially milled wheat and maize flour with folic acid may not be very effective since the reach of these foods to the population, especially maize flour, is limited. Most households produce and consume their own maize flour in both countries. The workshop recommended government to consider adding folic acid in sugar which is relative widely consumed, so that it could reach large target groups. Adding folic acid to sugar would be a novel approach.

2.3 Market Assessment of Fortified Foods

In Uganda four teams, each composed of four assessors drawn from UCPA and SHA-U and in Malawi three teams of four assessors carefully selected from CAMA and PASHL visited districts to sample fortified food vehicles and brought them to the laboratory for testing and analysis.

While in Uganda due to fairly large number of samples for oil and wheat, all the samples were screened through qualitative spot checks for vitamin A in oil and iron in both wheat flour and maize flour.

During sampling, participants realized that the smallest package size offered for wheat and maize flour was 5kg. They discussed whether producers need to offer smaller packages for the less privileged to afford. This would require further analysis.

2.3.1 Qualitative Analysis

Uganda

Food Vehicle	#samples collected	Positive	Negative	% Positive
Vegetable oil	130	110	20	85%
Wheat flour	84	73	11	87%
Maize flour	39	10	29	26%

At national level, out of the 130 samples collected for vegetable oil, 27 brands from manufacturers, both local and outside the country were collected, 15% tested negative for Vitamin A presence in vegetable oil. In the case of wheat flour, a total of 84 samples of 19 brands from 17 manufacturers were collected from the four regions. Of the 84 samples, 73 (87%) tested positive for presence of iron, and these were subjected to quantitative analysis. Only 39 maize flour samples were collected with only 10 showed the presence of iron when subjected to iron spot test.

The case of Malawi was a bit different since only a few samples were collected. The qualitative vitamin A and iron spot checks were not done for oil and flours respectively due to limited samples. However, all the samples of oil, wheat

flour and maize flour were subjected to quantitative analysis using the i-Check methodology.

2.3.2 Quantitative analysis

The quantitative analysis results for both Uganda and Malawi are summarized in the tables below.

Uganda

Vehicle	# of Samples	% Within limits	% Below Min levels
Vegetable Oil	85	55%	45%
Wheat flour	75	70%	30%
Maize flour	10	10%	90%

The table above shows that, 45% of oil samples from both local producers and imported did not meet the minimum requirement of the national standard. The situation for wheat flour was a bit encouraging with 70% of the wheat flour samples fortified within the range of the national standard. With constant enforcement and supervision of compliance by government inspectors, the performance of wheat should be able to improve.

All maize flour sampled brands had iron content below minimum levels in the standard and in most cases only at detectable lower limits of i-Check machine.

Malawi

Vehicle	# of Samples	% Within limits and above	% Below Min levels	% with no Vitamin A or no iron
Vegetable Oil	85	28%	30%	42%
Wheat flour	35	37%	37%	26%
Maize flour	35	40%	54%	6%

A total of 26 brands were identified and sampled from the three regions for vegetable oil. Overall, 28% of oil samples had vitamin A levels within acceptable market range of 20-40mg/kg. A good proportion, 42% of the samples, did not show vitamin A presence in the samples, which means the samples came from producers who claim to fortify but do not do so. Nearly all those samples were from decanted oil which could be losing vitamin A due to exposure to ultra violet light, or the decanted oil is not fortified in the country.

A total of 35 maize flour samples were collected from all the markets visited in the three regions. These samples were all subjected directly to i-Check

analysis for quantitative iron content. The findings revealed that 2 samples (6%) did not contain iron. This implies, only 33 samples (94%) would pass the iron sport test, if it was done before under-going quantitative analysis. Overall, only 30% of the samples contained iron within range 21-41mg/kg.

In general, 33% of the wheat flour brand samples had iron content within the range. Other brands at national level, 40% had iron content below minimum while 22% had no iron detected.

3 Discussions of the findings

Although the national requirement is that Uganda should import fortified food products, the market survey found out that imported oil brands from some industries were not fortified. This implies smuggling through porous borders and poor enforcement at the importation sites of Uganda.

In both countries, based on qualitative test results, a good number of vegetable oil, wheat flour and maize flour industries who claim to fortify are not fortifying. A number of producers supply both fortified and un-fortified brands in the Ugandan market. This shows high level of inconsistency among the producers hence cheating the consumers.

Based on the quantitative analysis of fortified sample requirements of the national standard, most samples were below minimum levels of the compliance. However, this will require follow-up to these industries to ascertain their compliancy at factory levels of the products and find out how their internal QA/QC systems operate. Lastly, a critical look at dosage rates, calibration and checking of premix reconciliation is required to reduce under fortification.

Decanting is normally associated with poor consumers who cannot not afford to pick the whole tin, bottle or jerrican of vegetable oil or flour and so prefer to by a small quantity. This can be and has been avoided in a number of countries by industries introducing small and affordable packages.

4 Actions points

Uganda

- The UCPA and SHA-U to have a meeting with the National Working Group on Food Fortification (NWF) to present the findings of the pull strategy and agree on way forward to improve compliance.

- UCPA and SHA-U to share the results to individual industries with the industry for internal improvements by the industries which are not doing well in compliance.
- Government should strengthen the border posts with the right personnel and equipment to ensure strict enforcement for goods that are imported so that substandard goods do not find their way on the Ugandan market.
- Government should engage and notify the identified exporters of these foods about the fortification requirement for export to Uganda.
- The UNBS to take interest to conduct industry inspection to confirm these findings and take action accordingly.
- UNBS to share industrial monitoring report of compliance for the different brands and industries with stakeholders.

Malawi

- One of the key recommendations was to share the pull report with the National Fortification Alliance to plan for actions to close the gaps in enforcement of compliance by the industries. This was done and a number of action points arrived at in this meeting:
 - The NFA to study the details of the market assessment report and develop concrete strategies to address the gaps identified in the report.
 - Boarder point of entry of imports is already being strengthened with rapid check tool kits to increase testing of samples of imports before allowing them to enter the country.
- Policy action on enforcement of the law to remove decanted products from the market
- Consumer awareness on importance of fortified food products and their safety is needed, especially that decanted products do not have vitamins.
- CAMA and PASHL will have meetings with traders and importers to remind them of the legislation on fortification to enable them with information on the logos, fortification claims of the products they source from their suppliers.

5 Conclusions

The landscape analysis reveals that, the associations do not have adequate financial, human and logistical resources to undertake their mandate. The membership contributions to the associations are meagre and non-consistent. They will definitely continue to require external support to build their capacity to perform their oversight role in the market under the pull strategy.

However, the pull strategy has demonstrated that consumers and the civil society has the right, the power and mandate to monitor the quality of products on the market. Therefore, their involvement in fortification monitoring at the market is in line with this mandate, and it is legal.

Although the pull strategy results shared with the government and national fortification alliances is basic, it has provided quick and cheap information for making decisions. It has also demonstrated to the industries that, government is not the only one watching them; even consumers do and this double approach might help to increase compliance.

The pull implementation should not be a one-off exercise but be a longer strategy to build the capacity of the consumers, parents and civil society organization to sustain market assessment before leaving the country partners on their own. Therefore, the next pull round of market assessment should have increased number of samples collected, ensure equal number of samples collected to avoid errors as much as possible.