GLOBAL ASSESSMENT OF HOME FORTIFICATION INTERVENTIONS, 2011

Home Fortification Technical Advisory Group

FINAL REPORT
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Preface

This global assessment is a joint collaboration of UNICEF and the International Micronutrient Malnutrition Prevention and Control Program (IMMPaCt) at the U.S. Centers for Disease Control and Prevention (CDC), with assistance from the Home Fortification Technical Advisory Group (HF-TAG). The origins of the assessment are grounded in UNICEF and CDC experiences implementing joint regional workshops to support the scale up of integrated infant and young child nutrition and home fortification interventions. These workshops highlighted the need for a better understanding of the global home fortification (HF) programmatic landscape including basic descriptions of programme activity, scope, scale and challenges for key home fortification strategies and these workshops led to the decision to carry out this global assessment.

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Disclaimer
The mention of product names, manufacturers, and websites in this document do not constitute an official endorsement for the products or companies by any of the agencies or individuals involved in the development of this report. They are mentioned to provide readers with descriptive information provided by participants on the types of products and manufacturers used in home fortification interventions.

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Acronyms

ACF	Action Against Hunger International
BCC	Behavior Change Communication
CBO	Community-based Organizations
CDC	U.S. Centers for Disease and Control and Prevention
CFS	Complementary Feeding Supplement
GAIN	Global Alliance for Improved Nutrition
HF-TAG	Home Fortification Technical Advisory Group
HF	Home Fortification
HKI	Helen Keller International
IYCN	Infant and Young Child Nutrition
LNS	Lipid-based nutrient supplement
MAM	Moderate acute malnutrition
MI	Micronutrient Initiative
MoH	Ministry of Health
MNP	Micronutrient Powders
MSF	Medicins sans Frontiers
NGO	Non-Governmental Organization
PoU	Point-of-use
RUTF	Ready-to-use therapeutic foods
RUF	Ready-to-use foods
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme

Executive Summary of the Home Fortification Global Assessment 2011

The objective of the Home Fortification Global Assessment was to map the current status of programmatic interventions being implemented and planned around the world in 2011 and to provide basic descriptive information about them. Staff at UNICEF Headquarters and regional focal points at Home Fortification Technical Advisory Group (HF-TAG) partner agencies contacted representatives in 152 countries and invited them to participate in the global assessment. The data were collected through a cross-sectional survey that gathered information using self-administered questionnaires that were emailed to potential participants. The questionnaires were available in English, Spanish, and French; participants responded in the language of their preference.

Information was collected on three types of home fortification (HF) products: micronutrient powders (MNP), lipid-based nutrient supplements (LNS), and powdered complementary food supplements (CFS). MNP is a powdered preparation of micronutrients, packaged in single or multiple-serving sachets, that is mixed into food while cooking or into food that is ready to eat. LNS is a paste preparation containing vitamins, minerals, energy, protein, and essential fatty acids, that is mixed into food that is ready to eat. CFS is a powdered preparation of micronutrients that can also contain high-quality protein, essential fatty acids, amino acids, enzymes, and macro-minerals (such as calcium, magnesium, potassium or phosphorus), which is mixed into food that is ready to eat. LNS and CFS both fall under the broader categorization of Complementary Food Supplements.

The inclusion criteria for this assessment were that the HF interventions were being implemented at the time of data collection or were planning to start implementation within the next 12 months; the interventions were preventive; one recommended mode of use was by mixing into food; HF interventions identified as research were included only if they were directly linked to a program; and HF interventions were in 152 low-income and middle-income countries. The interventions could be targeted at any population group.

Between June and September 2011, representatives in 109 countries (72%) submitted at least one completed questionnaire reporting on 91 HF interventions being implemented or planned that targeted young children, school aged children, pregnant and lactating women, and households. There were more missing data for planned interventions compared to implemented interventions, which is likely because the intervention component in question had not yet been fully defined.

The final report includes six chapters and six appendices. Chapter 1 provides an introduction to the assessment and Chapter 2 describes the methods. Chapter 3 characterizes the sample and includes information on the national nutrition frameworks and policies for home fortification. Chapters 4 to 6 describe the results for implemented and planned MNP interventions (Chapter 4), implemented and planned LNS interventions (Chapter 5) and implemented CFS interventions (Chapter 6). The appendices provide further information about the assessment, including the specific countries invited to participate in the assessment (Appendix A); the questionnaire (Appendix B); the organizations involved in completing the questionnaires (Appendix C); the reported MNP, LNS and CFS formulations (Appendix D); the reported regimen summaries for each intervention (Appendix E); and the local names for MNP and CFS products (Appendix F). As the report is comprehensive and lengthy, the reader might find it most useful to use the report as a reference to search for specific information as needed. The following section highlights some of the key results of the global assessment.

Key Results:

Home fortification interventions in countries

- 47 countries had at least one home fortification intervention implemented or planned to start within 12 months
- 59 MNP interventions were implemented or planned. Of these, 34 were implemented in 22 countries and 25 were being planned in 20 countries. The majority of the implemented interventions were in the Latin America and the Caribbean (n=14) and South Asia (n=11) regions, whereas the largest number of planned interventions were in the sub-Saharan Africa (n=8) and East Asia and the Pacific (n=7) regions.
- 20 LNS interventions were implemented or planned, including 17 implemented LNS interventions in 13 countries and 3 planned interventions in three countries. Among the implemented LNS interventions, 12 were taking place in the sub-Saharan Africa region.
- 12 CFS interventions were implemented in 8 countries, with 9 of the interventions occurring in the sub-Saharan Africa region. There were no CFS interventions being planned to start within 12 months of data collection.
- Some countries with no implemented or planned HF interventions expressed interest in introducing interventions in the future that would distribute MNP (30 countries), LNS (18 countries), or CFS (18 countries).

National nutrition policies including home fortification

- 40% of the national nutrition policies in the countries included home fortification strategies

Interventions integrated into multi-sectorial approaches

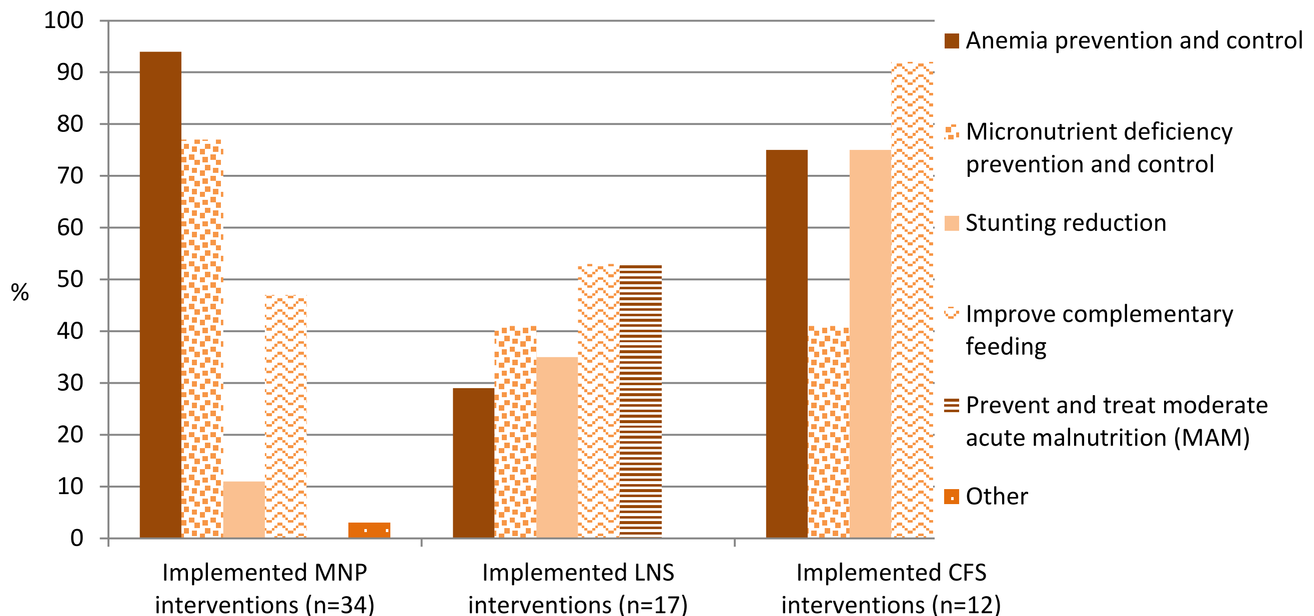
- 97% of the implemented MNP interventions
- 92% of the planned MNP interventions
- 94% of the implemented LNS interventions
- 100% of the planned LNS interventions
- 100% of the implemented CFS interventions

Most HF interventions were integrated as part of one or more other programmes, such as infant and young child nutrition, micronutrient deficiency prevention and control, anemia prevention and control, humanitarian response, or school feeding programmes.

Intervention Objectives

- Objectives for MNP, LNS and CFS interventions varied but typically included multiple objectives including prevention and control of anemia, micronutrient deficiencies and moderate acute malnutrition; as well as improved complementary feeding, stunting reduction, and others (Executive Summary Figure 1.0)

Executive Summary Figure 1.0 Objectives for implemented MNP, LNS, and CFS interventions, Home Fortification Global Assessment 2011



National Scale distribution

Few interventions were distributing home fortification products at a national scale, those at national scale included:

- 4 MNP interventions in Mongolia, Bangladesh, Bolivia, and the Dominican Republic
- 2 LNS interventions in Niger and Madagascar
- 4 CFS interventions in Botswana (n=2), Niger, and Belize

Expected reach of MNP interventions in 2011

- Implemented MNP interventions expected to reach 14.1 million participants, including:
    - 12.4 million children 6-59 months
    - 1.26 million children 6-23 months
    - 278,000 school age children
    - 145,000 children 6-36 months
    - 547 children 12-24 months
- 35% of implemented MNP interventions and 20% of planned MNP interventions expected to reach over 100,000 participants

Expected reach of LNS interventions in 2011

- Implemented LNS interventions expected to reach 1.14 million participants, including:
    - 1.1 million children 6-23 months
    - 45,000 children 6-36 months
    - 5,700 children 6-59 months
- 24% of implemented LNS interventions expected to reach over 100,000 participants

Expected reach of CFS interventions in 2011

- Implemented CFS interventions expected to reach 1.95 million participants, including:
    - 1.7 million children 6-23 months
    - 70,000 children 6-36 months
    - 60,000 pregnant and lactating women
    - 128,000 from other populations
- 25% of implemented CFS interventions expected to reach over 100,000 participants

Most frequently reported intervention target groups

- Children 6-59 months for implemented MNP interventions (41%)
- Children 6-23 months for planned MNP interventions (68%)
- Children 6-23 months for implemented LNS interventions (71%)
- Children 6-23 months for implemented CFS interventions (58%)

Most home fortification interventions were for young children, and across interventions multiple young child age ranges were targeted. MNP and CFS interventions also targeted populations other than young children less than 5 years of age, including school age children, lactating and pregnant women, and households.

Distribute MNP, LNS, & CFS products for free to participants

- Most implemented and planned MNP and LNS interventions distribute products for free to participants (range 88-100%)
- 42% distribute CFS product for free to participants

Most reported MNP and LNS formulations

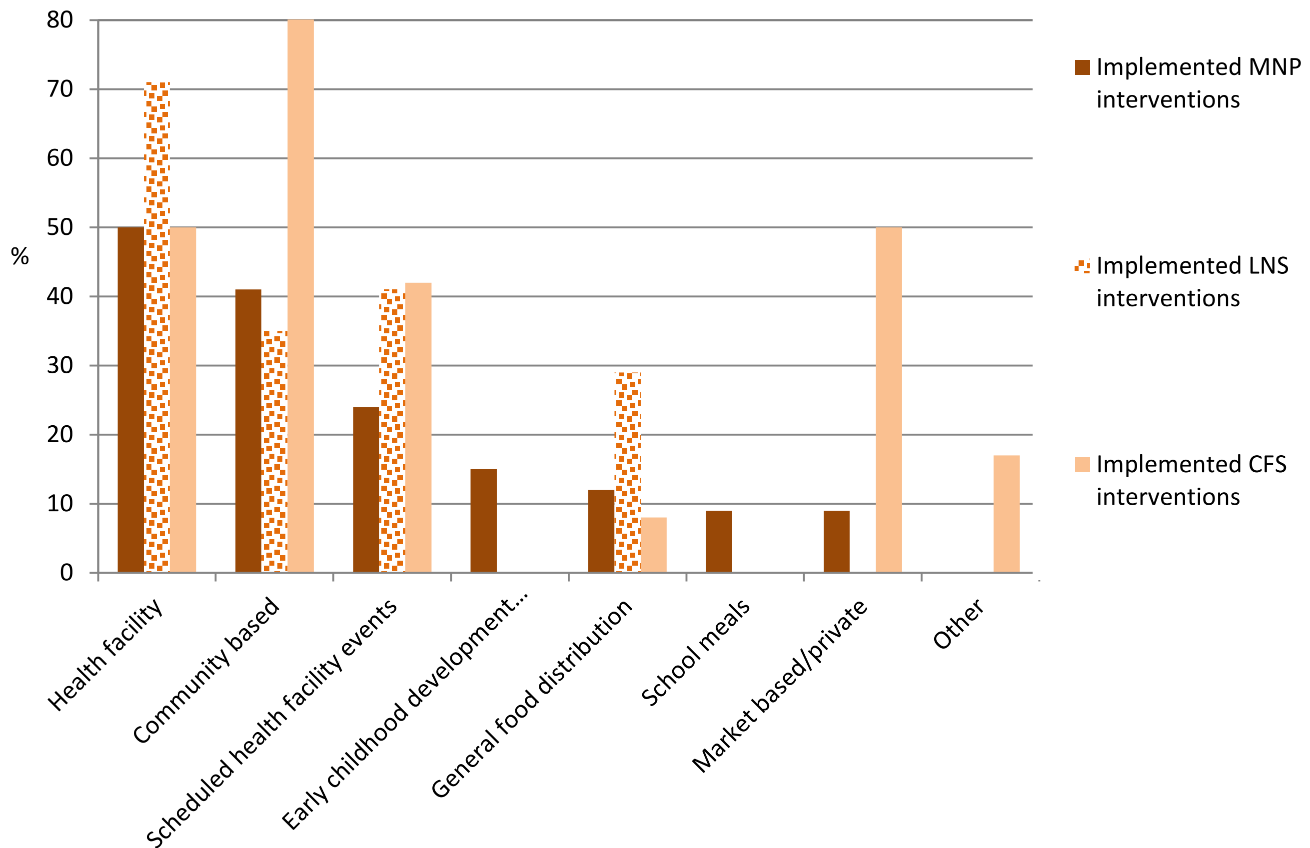
- Five micronutrients for implemented MNP interventions (44%)
- 15 micronutrients for planned MNP interventions (44%)
- Medium quantity-LNS for implemented LNS interventions (77%)

Multiple formulations were reported for the MNP and LNS products. Overall, most MNP interventions reported either the five or 15 micronutrients formulation, and LNS interventions reported either the medium quantity or small quantity formulations.

Most reported distribution method

- Most interventions reported multiple distribution methods with the most frequently reported including health facility, scheduled health facility events, community based, school based and early childhood development center, market based, and general food distribution (Executive Summary Figure 1.1)

Executive Summary Figure 1.1 Intervention distribution channels [a] for home fortification products, Home Fortification Global Assessment 2011



[a] Examples of community-based include groups or house visits and community events. Examples of scheduled facility events include child health days, immunization campaigns and outreach

Frequency of distribution of MNP, LNS and CFS products, Quantity distributed, and Suggested intake

There was heterogeneity in the HF product distribution schedules, quantity of HF products given at each distribution and the suggested intake schedule. See Figures 4.3, 4.4 and 5.3 in the report to review the product distribution schedule, quantity distributed and suggested intake for implemented and planned MNP and implemented LNS interventions. Appendix E describes the regimen for all interventions by country and target group, including the distribution method, frequency of distribution, quantity given to participants at each distribution, recommended intake schedule, and formulation.

- Products distributed on a monthly basis
    - 35% of implemented MNP interventions
    - 28% of planned MNP interventions
    - 82% of implemented LNS interventions
    - 50% of CFS interventions

- MNP sachets and LNS pots given each distribution
    - 32% of implemented MNP interventions provided 60 MNP sachets each distribution
    - 40% of planned MNP interventions expected to give 30 MNP sachets each distribution
    - 77% of implemented LNS interventions gave 4 LNS pots at each distribution

- Recommended product intake
    - 56% of implemented MNP interventions recommended daily MNP intake
    - 36% of planned MNP interventions expected to recommend daily MNP intake
    - 71% of implemented LNS interventions recommended LNS intake of three teaspoons, three times per day
    - 33% of CFS interventions recommended intake of one sachet a day

Behavior change communication strategy in place

- 79% of implemented MNP interventions
- 52% of planned MNP interventions
- 82% of implemented LNS interventions
- 100% of implemented CFS interventions

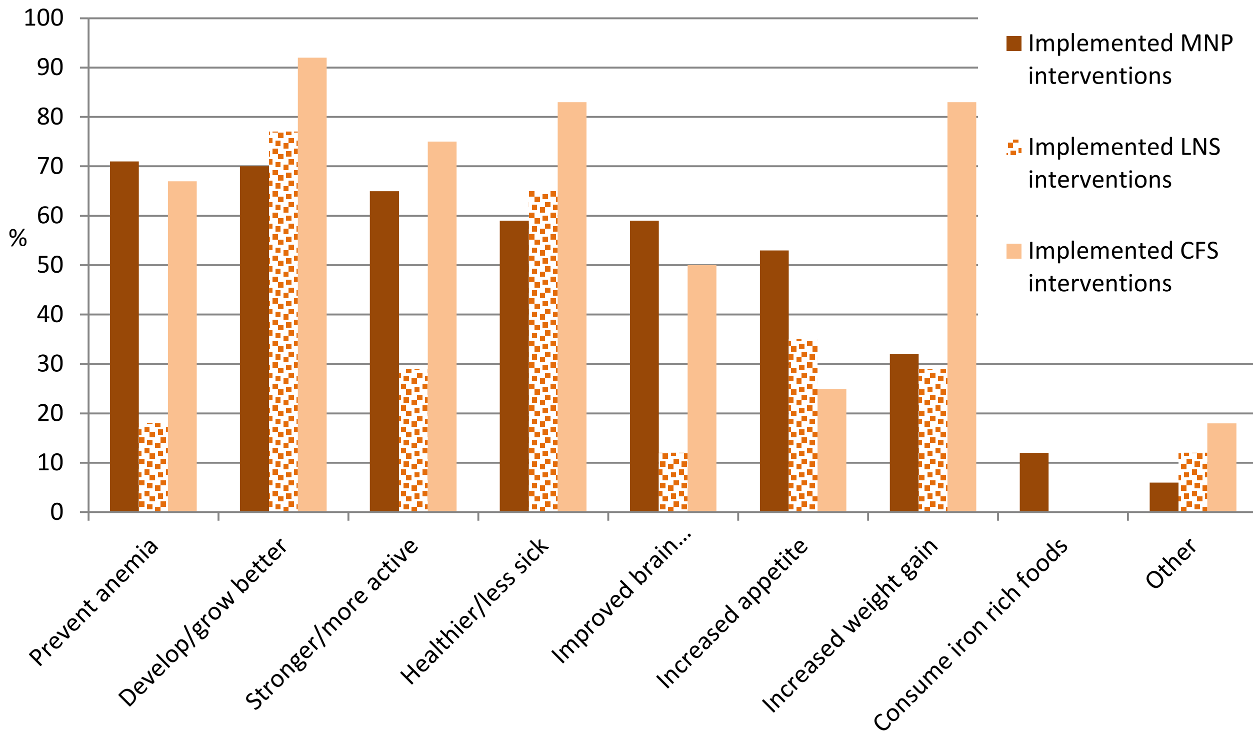
Local name developed for MNP, LNS or CFS product

- 85% of implemented MNP interventions
- 28% of planned MNP interventions
- 0% of implemented LNS interventions
- 75% of implemented CFS interventions

Reasons told to participants to use the MNP, LNS or CFS products

- As part of the intervention package, most interventions told participants multiple reasons to use the MNP, LNS or CFS product such as to support better development and growth, to be stronger or more active, to be healthier or experience less sickness, to prevent anemia, improve brain development or intelligence, improve weight gain, and increase appetite (Executive Summary Figure 1.2)

Executive Summary Figure 1.2 Reasons told to participants to use the MNP, LNS, or CFS products, Home Fortification Global Assessment 2011



Monitoring and evaluation plan in place

Interventions reported whether they had a "monitoring and evaluation plan" for the intervention and the majority had one in place.

- 88% of implemented MNP interventions
- 80% of planned MNP interventions
- 77% of implemented LNS interventions
- 92% of implemented CFS interventions

Coordinating body oversees intervention development and implementation

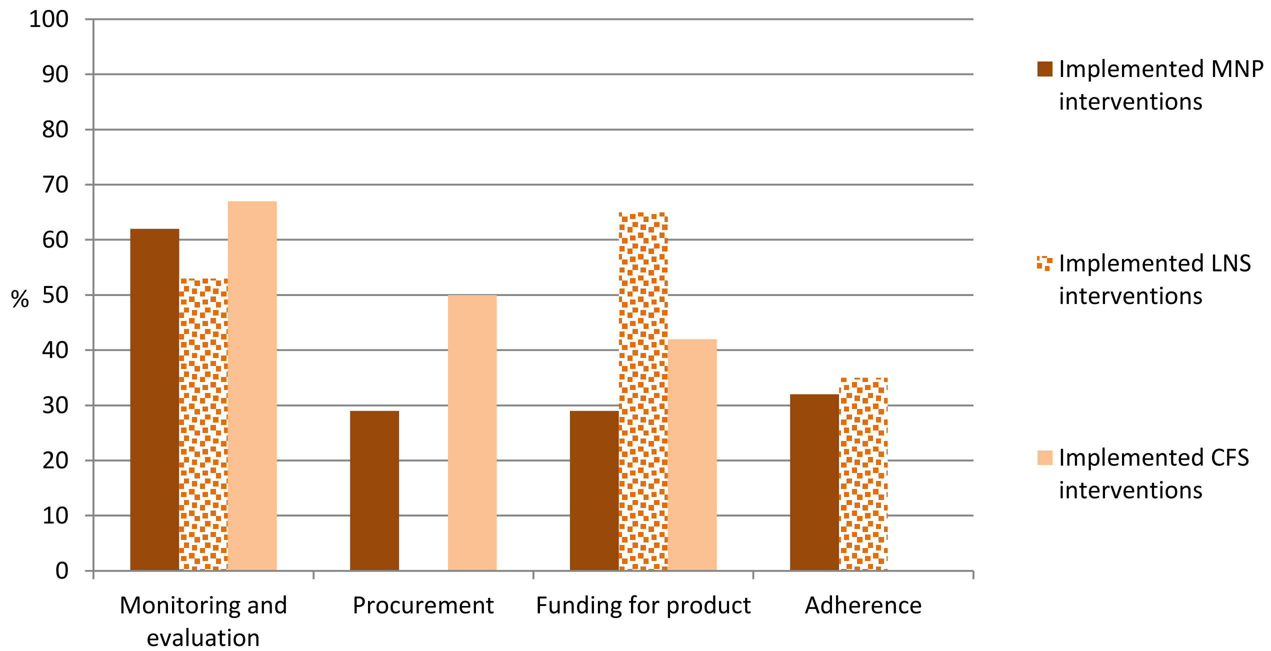
- 85% of implemented MNP interventions
- 32% of planned MNP interventions
- 77% of implemented LNS interventions
- 92% of implemented CFS interventions

For implemented interventions it was common to report a coordinating body was involved in overseeing the development and implementation of the intervention.

Top three intervention implementation challenges by product

- Implemented MNP, LNS and CFS interventions had similar top challenges to implementing interventions with all three groups stating monitoring and evaluation was a top challenge, in addition to procurement, funding for products, and adherence to the products (Executive Summary Figure 1.3).

Executive Summary Figure 1.3 Top three [a] intervention implementation challenges by product, Home Fortification Global Assessment 2011



[a] The top three challenges are reported for each HF product (MNP, LNS and CFS). For implemented MNP interventions, 29.4% reported procurement and 29.4% reported funding for product as a challenge so four challenges are listed

CHAPTER 1: INTRODUCTION

Poor nutrition contributes to an estimated 8.1 million preventable deaths per year among children less than five years of age (UNICEF 2010). Malnutrition undermines the potential of billions of people worldwide and limits both the physical and mental development of young children, reducing their ability to learn and their productivity later in life. Good nutritional status contributes significantly to improvements in mortality among children less than five years of age, the burden of disease, maternal health and gender equality.

Improving nutritional status of people is complex and depends on many factors, including access to nutritious foods, health care, education, and improved incomes; integrated strategies focused on these areas are important for long term improvements. In the short term, micronutrient interventions such as supplementation, mass food fortification, and home fortification (HF)[1] are efficacious and cost-effective strategies that can reduce deficiencies and improve nutrition and health status (Bhutta et al 2008). Micronutrient interventions are considered some of the world's best investment for development due to their low cost and potential for high return in improved capacity, productivity and health; bundled interventions including micronutrient interventions to reduce undernutrition in preschoolers received the top ranking of the 2012 Copenhagen Consensus Panel (Copenhagen Consensus Panel 2012).

For HF, innovative products have been developed to help prevent micro- and/or macronutrient deficiencies. HF products are attractive due to their generally high acceptability in field settings, particularly for interventions focused on young children. HF products are usually easy to integrate into existing food practices since their main objective is to provide the nutrients that are missing or present in inadequate amounts in the usual diet. For these reasons HF products are strategically important to address micro- and macronutrient deficiencies in the global nutrition context and they are increasingly included as key strategies in intervention packages designed to address malnutrition. Although, HF products have most commonly been used to improve the quality of complementary foods prepared at home for young children 6 to 23 months and beyond the complementary period for young children up to 59 months of age, several programs around the world are currently using these products to fortify meals of school children, pregnant women and other vulnerable groups.

Due to the rapid expansion of interventions including home fortification strategies globally, the Home Fortification Technical Advisory Group (HF-TAG) was established in 2009 as a global coordinating body to provide technical guidance on the development, implementation, and monitoring of home fortification programs. HF-TAG Executive Committee members include representatives from the public, private, academic, and non-governmental organization (NGO) sectors. UNICEF and U.S. Centers for Disease Control and Prevention (CDC) are members.

[1] Also called point-of-use (PoU) fortification

1.1 Rational for the Global Assessment of Interventions including Home Fortification Strategies

Globally, HF products are increasing included in infant and young child nutrition (IYCN) and emergency programmes. HF is also a central focus of the UNICEF- CDC cooperative agreements. Through this collaboration, UNICEF and CDC have supported the scale up of country programmes and have conducted five regional workshops on the use of home fortificants as part of integrated IYCN programmes. The regional workshops were valuable in that they documented activities in each region and helped country representatives work on designing their programs and implementation plans. Additionally, they also provided a forum for countries to share their experiences, especially micronutrient powder (MNP) interventions which have been carried out more widely compared to other HF strategies. They also provided an ongoing platform for global partners to discuss issues related to HF interventions. However, the workshops were regional in scope and the content focused primarily on MNPs, with very little or no information about other HF products. Critical global information gaps remained and countries implementing interventions including HF products had little reference information regarding other country experiences, best practices or tools. The concept of a global assessment emerged from these workshops because the global community lacked a thorough understanding of programmes' scope, scale and challenges for interventions being implemented and planned around the world, and this information would strengthen the development of appropriate guidelines, technical support, and mobilization of financial resources.

1.2 Objectives of the Global Assessment and Expected Uses of the Findings

The objectives of this global assessment were to help address the existing information gaps by mapping the current status of programmatic interventions being implemented and planned by countries and the various partners around the world in low and middle income countries, and provide basic descriptive information about them. Country level program staff can use the report to find information about activities in other countries in order to apply what is useful to their context, while global level development partners, donor agencies, HF product manufacturers, and research institutions can use the report to inform guidelines and technical support, and to mobilize financial resources. Ideally the results of this assessment will be used to develop program guidance, identify gaps, prioritize technical and other support needed, and facilitate communication among countries and partners in order to advance the HF agenda.

CHAPTER 2: METHODS

2.1 Design

This survey was cross-sectional and data were collected using self-administered questionnaires that were emailed to potential participants.

A project coordinator was responsible for managing all data collection activities and communications. For the majority of interventions in countries, there were two main steps in the data collection process:

1) The first step involved HF-TAG partner agencies naming regional focal points from their agencies to support this assessment, as well as identifying their existing projects. Nine partner agencies (see Table 2.1) identified 15 focal points, with two agencies identifying more than one (six from UNICEF and two from Action Against Hunger International).

Table 2.1 HF-TAG agencies with identified focal points to distribute questionnaires and assist data collection, Home Fortification Global Assessment 2011

Agency
Action Against Hunger International (ACF)
Global Alliance for Improved Nutrition (GAIN)
Helen Keller International (HKI)
Medecins sans frontiers (MSF)
Micronutrient Initiative (MI)
United Nations High Commission for Refugees (UNHCR)
United Nations Children's Fund (UNICEF)
United states Agency for International Development (USAID/A2Z)
World Food Programme (WFP)

In May 2011, the regional focal points were sent an email that included:

a. Descriptions of the global assessment and data collection process
b. Descriptions of the role of the focal point in the data collection process
c. Electronic versions of the questionnaire
d. A request to email their country representatives to complete the assessment
e. Example text they could use or adapt to send to their assigned country representatives

2) The second main step in the data collection process involved each regional focal point emailing their country representatives across 152 low and middle income countries (see Appendix A) to complete the questionnaires.

The questionnaires included an email contact for questions and for returning the completed questionnaires. The original due date for submitting a completed questionnaire was mid-June 2011. Given the inter-organizational and collaborative nature of most programs, country representatives were encouraged to complete the questionnaire in collaboration with all agencies involved in the

intervention. Because the intent was to capture all HF interventions being planned or implemented in 2011, the country representatives were also asked to send the questionnaire to other groups in the country planning or implementing other home fortification interventions.

The data collection process was slightly different for the 15 sub-Saharan African countries invited to participate in the UNICEF-CDC Workshop on *Improving the Nutritional Quality of Complementary Foods for Children 6-23 months through Home Fortification in sub-Saharan Africa* held in Senegal in June 2011. These country and agency representatives were sent the questionnaire in early May, simultaneous to all other countries, but were required to complete the questionnaires prior to their participation in the workshop. UNICEF Headquarters distributed the questionnaires directly to UNICEF offices in the countries participating in the workshop, and the completed questionnaire(s) were returned prior to the workshop.

All 152 countries targeted for inclusion in the assessment were contacted by the regional focal points or by the assessment coordinator at UNICEF Headquarters. Individuals contacted in the targeted countries were usually the country-based nutrition staff working for United Nations or other international agencies (e.g., UNICEF, World Food Programme, Helen Keller International) or for national governments (e.g., Ministry of Health staff). The total number of individuals invited to participate is unknown; however, in some countries multiple individuals received invitations to participate by UNICEF headquarters and HF-TAG regional focal points. For example, individuals in Bolivia received questionnaires from UNICEF, the Micronutrient Initiative, and the World Food Programme.

Additional strategies were carried out to identify potential missing HF interventions. These included:

1. Contacting select product manufacturers: In April and May 2011, six global manufacturers of home fortification products were contacted and requested to provide information on HF product procurement and orders for 2010-2011 (see Table 2.2). Information received from four manufacturers was then used to cross-check identified interventions and follow up with any potentially missing interventions.

2. Verifying product procurement: UNICEF supply division in Copenhagen provided a list of UNICEF orders of HF products for 2010-2011 that was also cross-checked.

3. Searching the internet for additional interventions: In May 2011, an internet search was carried out in order to identify potential home fortification interventions among non-HF-TAG partners. Examples of key words searched include: micronutrient powders, MNP, lipid-based nutrient supplements, LNS, complementary food supplements, CFS, food based nutrient supplements, Sprinkles, Nutributter, Plumpy'doz, home fortification, point-of use fortification, home fortification programmes and point-of-use fortification programmes.

Table 2.2 Manufacturers of home fortification products contacted to provide procurement and orders for 2010-2011, Home Fortification Global Assessment 2011

Manufacturers
Nutriset
DSM
Piramal
Compact
Hexagon
Edesia

Data collection was scheduled for May and June 2011. Due to low response rates among some agencies and regions, reminder emails were sent to focal points and country representatives and completed questionnaires were accepted through September 2011.

2.2 Inclusion Criteria

There were several criteria for HF interventions to be included in this assessment. These included that the HF interventions were preventive; one recommended mode of use was by adding to food; HF interventions were in the planning or implementing stage; HF interventions identified as research were directly linked to a program; and HF interventions were in low and middle income countries. These criteria are further described below:

1. HF interventions must be for the prevention of malnutrition. For the purpose of this assessment, preventive HF products are defined as products that are added to food to improve micro and/or macronutrient intake and are used to prevent nutritional deficiencies and improve the quality of foods, rather than to only treat nutritional deficiencies as part of clinical practice. Interventions that aimed to prevent and treat malnutrition were included because one component was prevention.

   Three types of home fortification products were included in this assessment: micronutrient powders (MNP), lipid-based nutrient supplements (LNS), and powdered complementary food supplements (CFS). MNP is a powdered preparation of micronutrients, packaged in single or multiple-serving sachets, that is mixed into food while cooking or into food that is ready to eat. LNS is a paste preparation containing vitamins, minerals, energy, protein, and essential fatty acids, and is mixed into food that is ready to eat. CFS is a powdered preparation of micronutrients that can also contain high-quality protein, essential fatty acids, amino acids, enzymes, and macro-minerals (such as calcium, magnesium, potassium or phosphorus), which is mixed into food that is ready to eat. LNS and CFS both fall under the broader categorization of Complementary Food Supplements. See Table 1.3 for examples of the types of preventive HF products included in this assessment.

2. Mode of use was also an inclusion criterion. Some HF products may be consumed directly without adding to food, however as inclusion criteria for this assessment, they are included if one recommended mode of use includes mixing into foods. Supplementary foods that are not

intended to be mixed-in with other foods are excluded from this assessment, including blended foods such as corn soy blend (CSB), and treatment products such as ready-to-use therapeutic foods (RUTFs).

3. Data were collected for planned and currently implemented interventions. Interventions in the planning stage must plan to distribute HF products within 12 months. Implemented interventions could be at pilot, small or large scale. Projects that had been completed were excluded (n=1).

4. The aim of this assessment was to describe programmatic interventions. HF interventions identified as research were included only when they had a direct link to develop or modify a specific ongoing (planned or being implemented) program.

5. Low- and middle-income countries were the focus of data collection. Questionnaires were not distributed to high-income countries such as Australia, Canada, United States of America, or countries in Western Europe. See Appendix A for a list of the 152 countries contacted to participate in this assessment by region.

Table 2.3 Examples of categories of home fortification products [a], description of the product, methods of use, and examples, Home Fortification Global Assessment 2011.

Category of home fortification product	Description	Methods of use	Examples
Micronutrient Powder (MNP)	Powdered preparation of vitamins and minerals packaged in single or multiple dose sachets	-Mixed into food that is cooking or ready to eat	Chispitas™ Sprinkles™ MixMe™
Lipid-based nutrient supplements (LNS) [b]	Paste preparation containing vitamins, minerals, energy, protein, and essential fatty acids, which is mixed into food that is ready to eat	-Mixed into food that is ready to eat -Consumed directly	Nutributter™ Gazelle™ Plumpy'doz™
Powdered complementary food supplements (CFS) [b]	Powdered preparation of micronutrients that can also contain high-quality protein, essential fatty acids, amino acids, enzymes, and macro-minerals (such as calcium, magnesium, potassium or phosphorus), which is mixed into food that is ready to eat	-Mixed into food that is ready to eat or add water [c]	Ying Yang Bao™ TopNutri™

[a] Adapted from de Pee 2009 and HF-TAG, 2013.
[b] LNS and CFS both fall under the broader categorization of Complementary Food Supplements.
[c] Adding to water might be inappropriate or harmful if it is given in bottles interfering with breastfeeding or if the water is contaminated. However, adding to water is one possible method of use and is included here for clarity in data collection purposes. The column "Methods of use" is meant to be descriptive and not the suggested methods of use, particularly among all target populations.

2.3 Questionnaire
Data collection involved the use of an electronic self-administered questionnaire. The questionnaire content and data collection approach was based on the previous experience of circulating short questionnaires to countries participating in two UNICEF-CDC workshops held in Asia in 2009 and Latin America and the Caribbean in 2010 that focused on scaling up the use of MNPs to improve the quality of complementary foods for young children. The 2010 workshop questionnaire was used as a starting point for the global assessment questionnaire. The content was critically evaluated and revised, and then expanded for the inclusion of LNS and CFS HF interventions. The draft questionnaire was initially created and revised in English.

After this revision, the draft questionnaire was then reviewed by the HF-TAG Executive Committee, as well as five nutrition and health experts with experience designing or implementing HF interventions. The experts were culturally diverse with varying work experiences across Latin America, Africa, and Asia with MNP, LNS or CFS HF interventions. Some of the experts also pilot tested the questionnaire. After revising the questionnaire based on feedback from the HF-TAG Executive Committee and the five experts, the final English version was translated into French and Spanish, and then back translated into English by a professional translation company. All email communication related to data collection included the final questionnaires in English, French and Spanish.

Formatted as an Excel document, the questionnaire included closed- and open-ended questions. Closed-ended questions were formatted as pull down boxes and participants could select among the pre-determined possible responses. Open-ended responses were typed into the corresponding box. Participants were also invited to send longer open-ended responses and additional documents related to their HF intervention. Examples of suggested materials to send include press releases, national nutrition policies that include home fortification, HF intervention protocols and descriptions, reports or publications of the program, and behavior change communication materials such as images of the sachets and packaging.

The final questionnaire (see Appendix B) collected information on national nutrition and home fortification policies; descriptions and objectives of the HF interventions; management, coordination, ownership, funding, and structure of the HF interventions; formulations, and government registration and approvals of HF products; procurement, manufacturing, and quality assurance of the HF products; packaging and distribution of the HF products; behavior change communication strategies; monitoring and evaluation; barriers to implementation; and lessons learned.

The final version of the questionnaire included five Excel sheets and a contact email in case of questions (see Appendix B). The first sheet included summary instructions and general questions about respondent contact information, the national nutrition and home fortification policies and HF intervention(s) in the country. Responses to the first sheet then determined which of the following sheets the respondents should complete. If the country had no existing program(s) or intervention plans under development, then they only completed the first sheet. The subsequent three sheets included questions specific for MNP, LNS, and CFS interventions; the participants determined the corresponding sheet(s) to complete for each intervention and target group based on whether they

were planning or implementing one of these HF interventions. The fifth sheet provided additional instructions, examples, and detailed guidance for completing certain questions. With this questionnaire design, some returned questionnaires documented no interventions in the country and other questionnaires included information for multiple interventions.

2.4 Quality Control, Data Management, and Analysis

All returned questionnaires were reviewed for completeness and duplication. There was follow up with participants via email and/or phone when responses were unclear or there were duplicate questionnaires submitted with conflicting responses for the same home fortification intervention. Duplicate questionnaires occurred in two instances where different partners independently completed and submitted files; this was brought to the participants' attention and they then collaborated to submit a single questionnaire. Data were entered into SPSS v.20 database. LNS and CFS both fall under the broader categorization of Complementary Food Supplements, but the analysis was stratified and data were reported for LNS and CFS separately. Descriptive frequencies of all variables were reported for each of the HF product types globally, by region, and by status (planned or implemented). Figures of world maps were also generated illustrating the distribution of HF interventions globally and by region.

See appendix A for categorization of countries into global regions for analysis in this report. An intervention was defined as the use of one HF product in a specific target group. Interventions were categorized as "planned to start distributing HF within 12 months" or "currently implementing HF" based on their self-report at the time the completed questionnaire was submitted.

2.5 Assessment Team

A UNICEF-CDC team, including a project coordinator, carried out all technical work related to the design and development of all materials, carried out data management, analysis and writing, and are responsible for the final content of the report. UNICEF and the HF-TAG focal points carried out the data collection. The HF-TAG Executive Committee provided feedback on the data collection protocol and questionnaire, assisted with identifying the focal points from each participating HF-TAG agency, and reviewed the final report. The HF-TAG focal points supported the distribution and completion of the questionnaires. Karen Codling assisted with coordinating data collection in Asia.

2.6 Strengths

This assessment has several strengths related to the content and design. The draft protocol and questionnaire were reviewed by the HF-TAG Executive Committee. This is the first global assessment of HF interventions being planned or implemented. The assessment collected detailed and systematic information on major aspects of HF interventions that are being implemented around the world in low- and middle-income countries and used multiple methods to identify potential HF interventions to invite to participate. The assessment provides unique information for multiple audiences, including country level program staff seeking information about existing activities and relevant experiences they can apply to their context, as well as global level development partners, donor agencies, HF manufacturers and research institutions that require information for guidelines development, identifying evidence gaps, developing technical support, and for mobilizing resources.

2.7 Limitations

This assessment includes several limitations related to the use of a self-administered questionnaire and the design of the data collection. There may be errors related to self-report or missing data if the participants were not familiar with or misunderstood the instrument content or format. Furthermore, the reported data was not verified using other sources and may be inconsistent with official or unofficial government documents or program documents. The questionnaire was long and the content covered many domains and involved primarily closed-ended questions (see Appendix B). As a result, it was not possible to get in-depth information on all topics and some are only described at a high level without many details.

Participants were requested to complete the questionnaire with representatives from all organizations involved in the interventions, but this did not occur consistently and some responses might reflect the perspectives of the organization completing the questionnaire versus all organizations involved in the intervention. Also, there was more missing data for planned interventions compared to implemented interventions, which is likely because the intervention component in question had not yet been fully defined. Obvious errors and missing data were followed up via email and phone with participants and resolved when possible, although not all participants responded to email and phone clarification requests even when contacted multiple times.

The data collection design relied heavily on agencies that are members of HF-TAG. Agencies that are not members of HF-TAG were not directly contacted to participate in this assessment, including the World Health Organization or the Ministries of Health in the 152 countries. It is understood that agencies that are members of HF-TAG support the majority of HF interventions globally in terms of the number of interventions planned or implemented, and the populations reached. The expectation is that only a few organizations might not have been contacted and given the opportunity to participate in the global assessment. However, some countries or agencies with known interventions did not participate in the assessment.

Of the six global manufacturers of HF products contacted to provide procurement and orders for 2010-2011, only four provided this information. Also, small scale manufacturers in countries that may also produce products regionally were not contacted. This may have limited the identification of HF interventions and the ability to invite them to participate in the assessment.

Despite these limitations, 129 questionnaires were returned from 109 countries across Latin America, Africa, Asia, Central and Eastern Europe, and the Middle East. (As questionnaires were completed for each intervention, some countries reported on multiple interventions.) In addition, five countries did not return a questionnaire but responded via email that they do not have HF interventions being planned or implemented. The number of responses, distribution globally of responses across all regions and by product is a unique data collection effort and offers rich information for programmatic and global policy needs.

CHAPTER 3: CHARACTERISTICS OF THE SAMPLE AND NATIONAL NUTRITION FRAMEWORKS

Representatives in all 152 countries were contacted and invited to participate in the global assessment. The representatives contacted were usually the country-based nutrition staff working for United Nations or other international agencies (e.g., UNICEF, World Food Programme, Helen Keller International) or for national governments (e.g., Ministry of Health staff). A total of 129 questionnaires were returned, with at least one questionnaire received from representatives in 109 countries (72%). The UNICEF country offices of Brazil, Bulgaria, Cape Verde, Chile, and Costa Rica responded via email that there are no HF interventions in their countries and no questionnaire were received from these countries. The organizations involved in completing at least one questionnaire are listed in Appendix C; the highest participation was from Ministries of Health, UNICEF, and WFP.

Among the 129 questionnaires returned, 70 included information on a total of 91 HF interventions currently being implemented or planned to start within the next 12 months (see Table 3.0) in 47 countries. These included 59 MNP interventions (34 implemented in 22 countries, 25 planned in 20 countries), 20 LNS interventions (17 implemented in 13 countries, 3 planned in 3 countries), and 12 CFS interventions (12 implemented in 8 countries, 0 planned). Figure 3.1 shows a map highlighting the 47 countries by region with these 91 HF interventions. Among the 129 questionnaires, 59 reported basic information about policies or potential future interest in HF interventions, but they were not currently implementing a HF intervention or planning to do so within the next 12 months. Figure 3.2 shows a map of the countries by product where interest was expressed to start at least one MNP, LNS or CFS intervention in the future.

Table 3.0 Total number of HF interventions implemented or planned, and by region, Home Fortification Global Assessment 2011

Item	Total		sub-Saharan Africa		Middle East and North Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total number of interventions implemented or planned	91	100	33	36.3	1	1.1	16	17.6	17	18.7	21	23.1	3	3.3
MNP interventions implemented or planned	59	64.8	10	16.9	0	0.0	16	27.1	12	20.3	18	30.5	3	5.1
LNS interventions implemented or planned	20	22.0	14	70.0	1	5.0	0	0.0	3	15.0	2	10.0	0	0.0
CFS interventions implemented or planned	12	13.2	9	75.0	0	0.0	0	0.0	2	16.7	1	8.3	0	0.0

Figure 3.1 Countries with at least one home fortification intervention implemented or planned to begin by 2012, by region, n=47, Home Fortification Global Assessment 2011

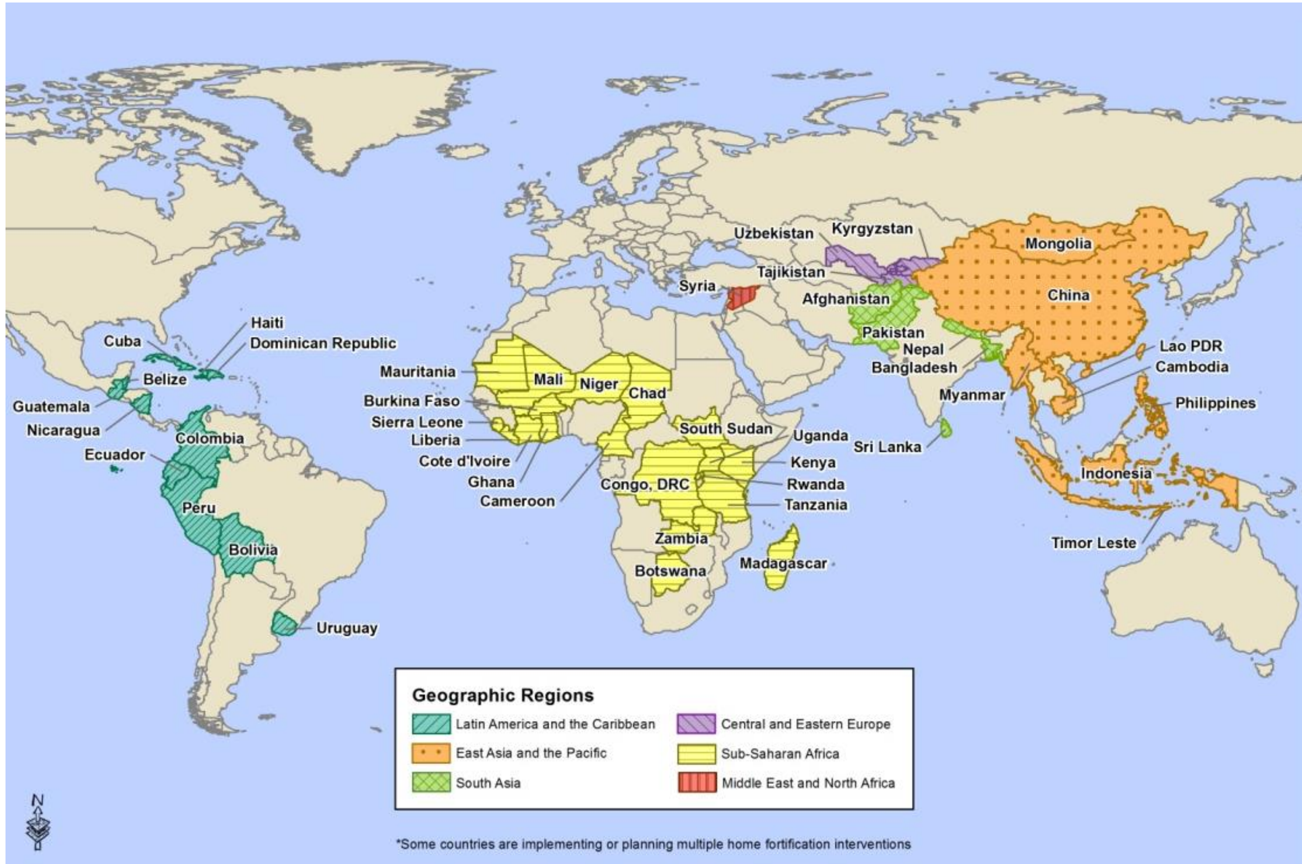
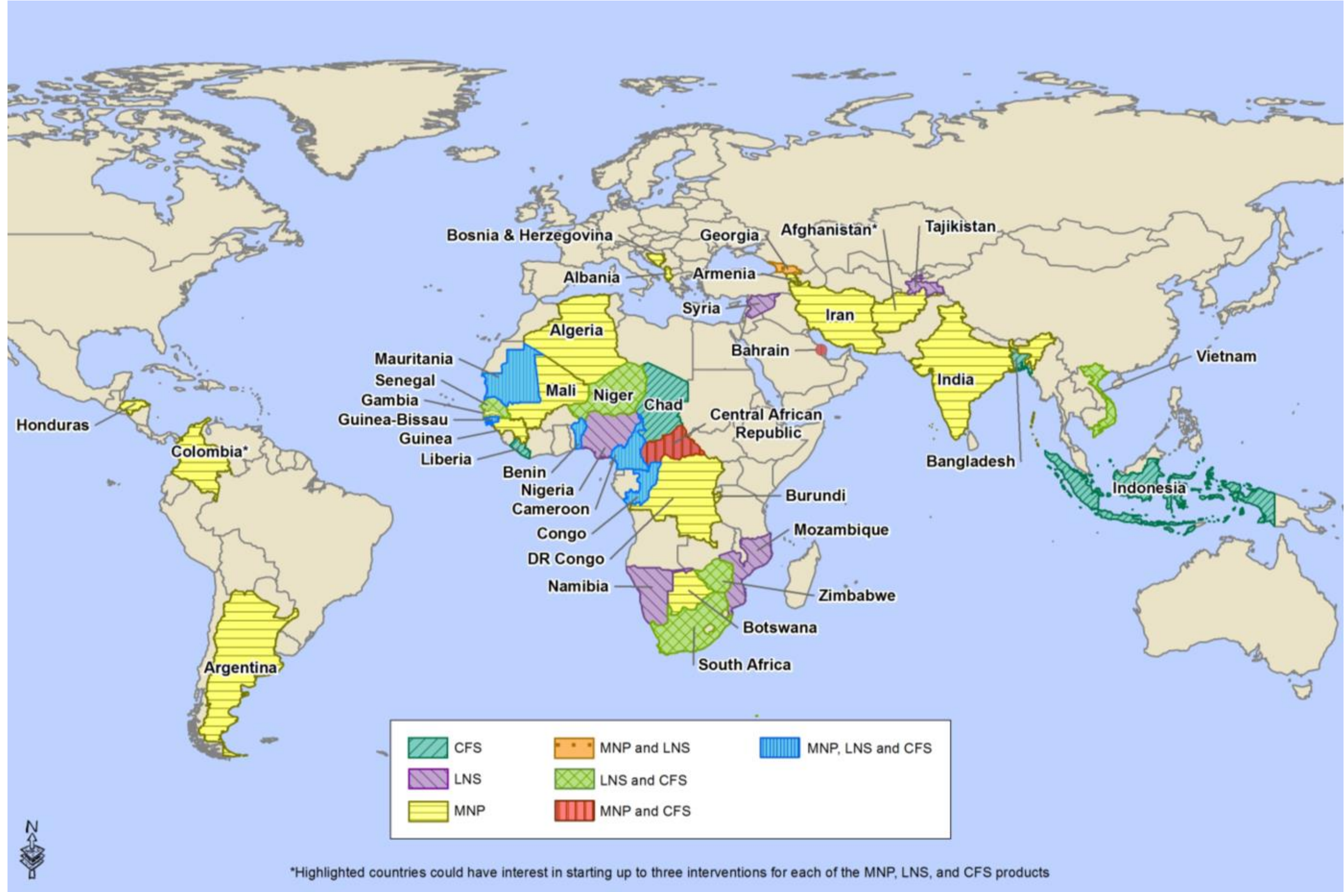


Figure 3.2 Countries with an interest in implementing home fortification program by product, n=57 MNP, LNS or CFS interventions in 38 countries, Home Fortification Global Assessment 2011



3.1 National Nutrition Frameworks for Home Fortification

National nutrition policy frameworks that include HF interventions indicate a strategic decision of the government and partners to support these interventions. This institutionalized commitment may influence the feasibility and sustainability of these interventions over the short and long term. Among all interventions, 40% reported the national nutrition policy in their country included home fortification strategies (Table 3.1). This was most commonly reported for countries in sub-Saharan Africa (36%) and Latin America and the Caribbean (25%). Except for countries in East Asia and the Pacific, many reported that home fortification was part of more than one nutrition framework. Home fortification was most frequently part of micronutrient deficiency prevention and control policies (73%), followed by infant and young child feeding (55%), anemia prevention and control (55%), and food fortification policies (48%).

Table 3.1 National policy framework for home fortification, by region, Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total number of countries		109	100	41	31.8	13	10.1	8	6.2	11	8.5	19	14.7	17	13.2
National nutrition policy includes home fortification	Yes	44	40.4	16	36.4	2	4.5	5	11.4	5	11.4	11	25.0	5	11.4
	No	64	58.7	25	39.1	11	17.2	3	4.7	6	9.4	7	10.9	12	18.8
	Don’t know	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0
If yes (n=44), included with policy for [a]	Food fortification	21	47.7	10	47.6	2	9.5	1	4.8	0	0.0	5	23.8	3	14.3
	Infant young child nutrition	24	54.5	8	33.3	1	4.2	2	8.3	1	4.2	8	33.3	4	16.7
	Anemia prevention and control	24	54.5	7	29.2	1	4.2	3	12.5	1	4.2	8	33.3	4	16.7
	Micronutrient deficiency prevention and control	32	72.7	13	40.6	1	3.1	3	9.4	3	9.4	9	28.1	3	9.4

[a] Multiple choice answers, totals may equal more than 100%

CHAPTER 4: IMPLEMENTED AND PLANNED MICRONUTRIENT POWDER (MNP) INTERVENTIONS

Table 4.0 shows 59 MNP interventions were being implemented or planned across all regions, except in the Middle East and North Africa region. There were 34 MNP interventions implemented in 22 countries and 25 being planned in 20 countries Among those implementing (see Figure 4.1), Latin America and the Caribbean (41%) and South Asia (32%) reported the most MNP interventions, with fewer in East Asia and the Pacific (15%), sub-Saharan Africa (6%) and Central and Eastern Europe (6%). Sub-Saharan Africa reported the most MNP interventions being planned (32%), followed by East Asia and the Pacific (28%), South Asia (20%), Latin America and the Caribbean (16%), and Central and Eastern Europe (4%) (see Figure 4.2).

A total of 10 countries (28%) in South Asia, East Asia and Pacific, and Latin America and the Caribbean had reports of more than one MNP intervention being implemented or planned: Afghanistan (n=4), Bangladesh (n=7), China (n=2), Colombia (n=7), Guatemala (n=2), Indonesia (n=3), Pakistan (n=2), Nepal (n=3), Peru (n=2), and Philippines (n=2). Respondents in 30 countries that do not currently have MNP interventions being implemented or planned reported that they have interest in starting MNP interventions in the future; 53% were from sub-Saharan Africa, 13% from the Middle East and North Africa, and 13% from Central and Eastern Europe.

Table 4.0 Total number of MNP interventions implemented or planned and by region, Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East & North Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions	Total currently implemented or planned	59	100	10	16.9	0	0.0	16	27.1	12	20.3	18	30.5	3	5.1
	Implemented	34	56.7	2	5.9	0	0.0	11	32.4	5	14.7	14	41.2	2	5.9
	Planned	25	41.7	8	32.0	0	0.0	5	20.0	7	28.0	4	16.0	1	4.0

Figure 4.1 Countries with implemented MNP interventions by region, n=34 interventions in 22 countries, Home Fortification Global Assessment 2011

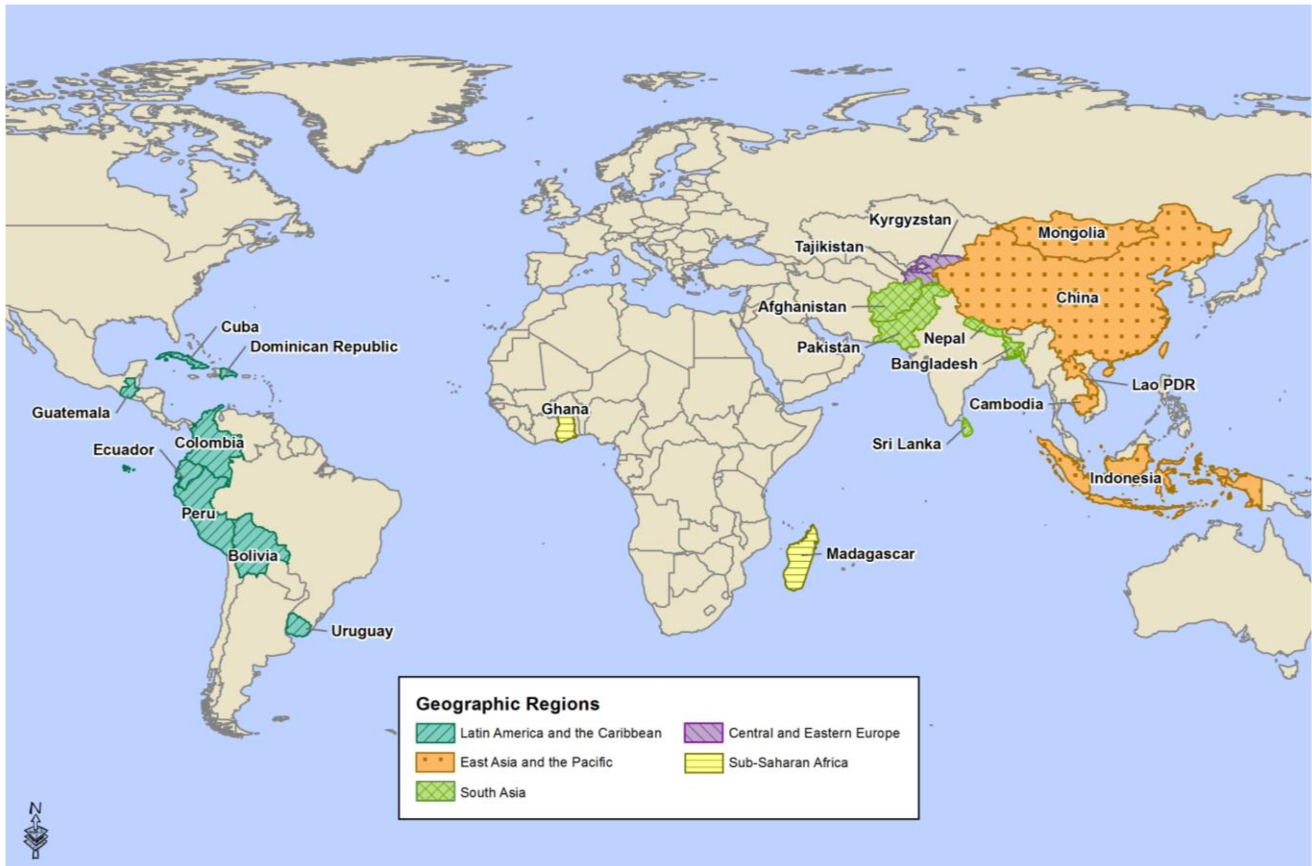
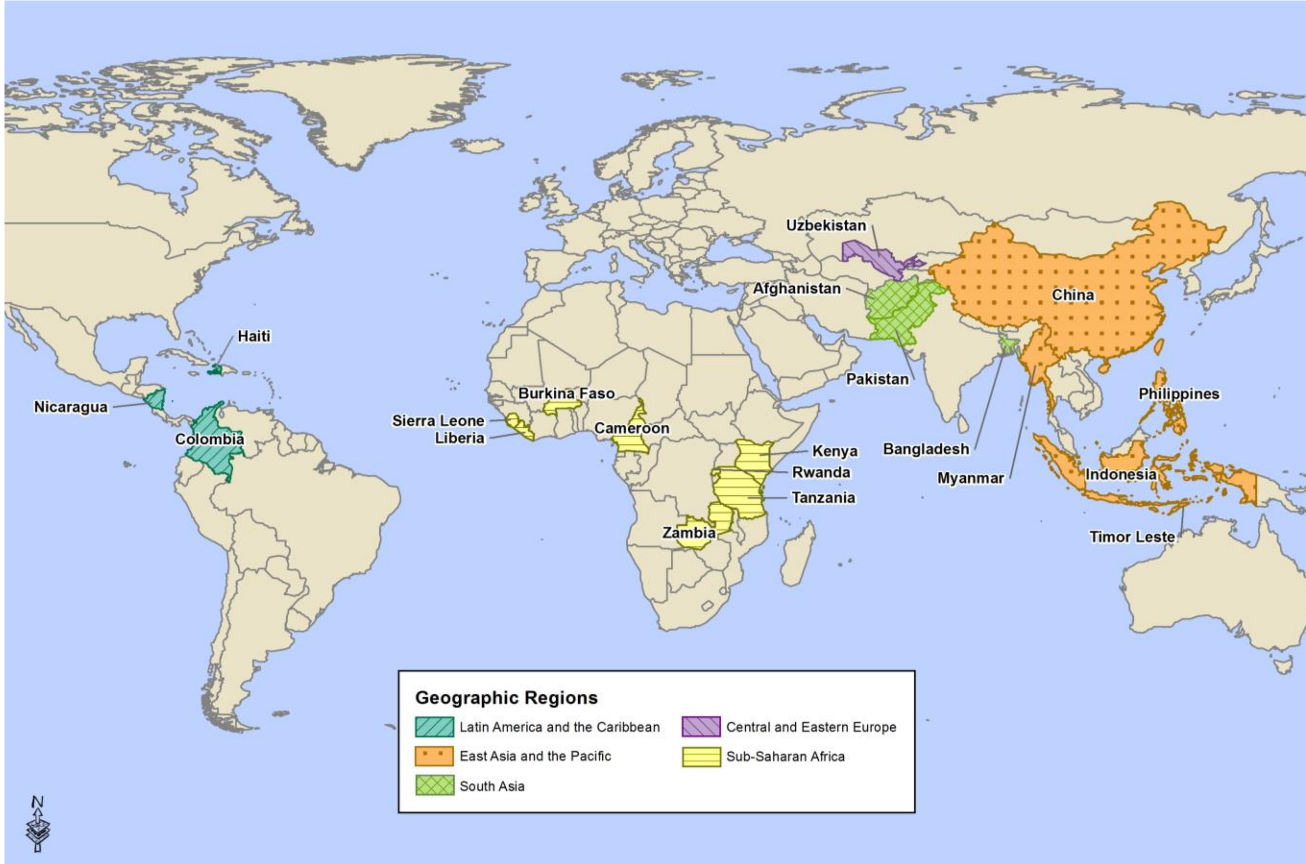


Figure 4.2 Countries with MNP interventions planned to begin by 2012 by region, n=25 interventions in 20 countries, Home Fortification Global Assessment 2011



4.1 Objectives, Expected Outcomes and Multi-Sectorial Approaches among Implemented MNP Interventions

Objectives and expected outcomes describe the purpose and what the intervention is trying to change and why the intervention was implemented. There was often more than one primary objective reported for currently implemented MNP interventions. Almost all interventions (94%) reported an objective of anemia prevention and control and 77% reported micronutrient deficiency prevention and control (Table 4.1). In addition, 47% reported an objective to improve complementary feeding and 32% to reduce stunting. Among MNP interventions with "other" objectives (9%), they included improving early childhood development, improving education among school aged children, and assessing the operationalization of the MNP project. The most frequently reported expected outcome was to reduce anemia (59%), followed by preventing vitamin and mineral deficiencies (15%). For six interventions, the expected outcome was not yet defined (6%) or missing (12%).

HF products should be implemented as part of broader nutrition strategies to improve the quality of the diet and integrated with other programs and approaches. Among the 33 MNP interventions implemented as part of an integrated multi-sectorial approach, it was common for interventions to be integrated with more than one approach. This included 73% integrated with infant and young child feeding programmes, 58% with micronutrient deficiency prevention and control programmes,

58% with anemia prevention and control programmes, 39% with humanitarian response, and 9% with school feeding programmes. Another 16% reported integration with another approach, including early childhood development/daycare programs (n=2) and comprehensive nutrition programmes (n=3).

Table 4.1 Interventions currently distributing MNPs: Intervention objective, expected primary outcome of the intervention, degree and type of integration, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Objective(s) of the MNP intervention [b]	Anemia prevention and control	32	94.1	2	6.3	10	31.2	5	15.6	13	40.6	2	6.3
	Micronutrient deficiency prevention and control	26	76.5	1	3.8	9	34.6	4	15.4	10	38.5	2	7.7
	Improved complementary feeding	16	47.1	0	0.0	7	43.8	2	12.5	6	37.5	1	6.2
	Stunting reduction	11	32.4	0	0.0	3	27.3	2	18.2	5	45.5	1	9.1
	Other	3	8.9	0	0.0	1	33.3	0	0.0	1	33.3	1	33.3
Expected outcome	Reduce Anemia	20	58.8	1	5.0	5	25.0	4	20.0	9	45.0	1	5.0
	Prevent vitamin and mineral deficiencies	5	14.7	0	0.0	4	80.0	1	20.0	0	0.0	0	0.0
	Improve nutrition status	2	5.9	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0
	Multiple outcomes [c]	1	2.9	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Not yet established	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
	Missing	4	11.8	1	25.0	1	25.0	0	0.0	2	50.0	0	0.0
MNP is part of integrated program	Stand alone intervention, not integrated	1	2.9	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Integrated multi-sectorial approach	33	97.1	2	6.1	10	30.3	5	15.2	14	42.4	2	6.1
Integrated multi-sectorial approach (n=33) as part of [b]	Infant and young child feeding programme	24	72.7	0	0.0	7	29.2	5	20.8	11	45.8	1	4.2
	Micronutrient deficiency prevention and control programme	19	57.6	0	0.0	6	31.6	3	15.8	8	42.1	2	10.5

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Anemia prevention and control programme	19	57.6	0	0.0	6	31.6	2	10.5	9	47.4	2	10.5
	Humanitarian response	13	39.4	0	0.0	5	38.5	1	7.7	5	38.5	2	15.4
	School feeding programme	3	9.0	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
	Other programmes	5	15.6	0	0.0	1	20.0	0	0.0	4	80.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Multiple expected outcome in Bangladesh included anemia reduction and creating awareness about MNP home fortification and iron deficiency anemia.

4.2 Objectives, Expected Outcomes and Multi-Sectorial Approaches among Planned MNP Interventions

Similar to the implemented MNP interventions, there were often multiple objectives reported for the 25 MNP interventions in the planning stage. The most frequently reported objective was anemia prevention and control (92%), followed by micronutrient deficiency prevention and control (80%), improved complementary feeding (68%), and stunting reduction (40%) (Table 4.2). The three additional objectives reported in the "other" category were to improve early child development, vaccination coverage, and a conditional cash transfer program. The most frequently reported expected outcome was anemia reduction (48%).

Almost all of the planned MNP interventions were integrated with multi-sectorial approaches (92%) and sometimes with more than one approach. This includes 83% integrated as part of infant and young child feeding programmes, 67% part of micronutrient deficiency prevention and control programmes, 65% part of anemia prevention and control programmes, 26% part of humanitarian responses, and 13% part of school feeding programmes. In addition, 26% reported integration with another type of multi-sectorial programme, including comprehensive nutrition and health programmes (n=3), community management of acute malnutrition (n=1), conditional cash transfer program (n=1), and early childhood development (n=1).

Table 4.2 Interventions planning to distribute MNPs: intervention objective, expected primary outcome of the intervention, degree and type of integration, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP Interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
General objective(s) of the MNP intervention [b]	Anemia prevention and control	23	92.0	8	34.8	4	17.4	7	30.4	3	13.0	1	4.3
	Micronutrient deficiency prevention and control	20	80.0	6	30.0	5	25.0	6	30.0	2	10.0	1	5.0
	Improved complementary feeding	17	68.0	6	35.3	3	17.6	6	35.3	1	5.9	1	5.9
	Stunting reduction	10	40.0	2	20.0	2	20.0	4	40.0	2	20.0	0	0.0
	Other	3	8.9	0	0.0	0	0.0	0	0.0	2	66.7	1	33.3
Expected outcome	Reduce Anemia	12	48.0	2	16.7	3	25.0	5	41.7	1	8.3	1	8.3
	Prevent vitamin and mineral deficiencies	2	8.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0
	Improve complementary feeding	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Improve nutrition status	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Multiple outcomes [c]	5	20.0	1	20.0	2	40.0	1	20.0	1	20.0	0	0.0
	Missing	4	16.0	2	50.0	0	0.0	0	0.0	2	50.0	0	0.0
MNP is part of integrated program	Stand alone intervention, not integrated	2	8.0	0	0.0	2	100	0	0.0	0	0.0	0	0.0
	Integrated multi-sectorial approach	23	92.0	8	34.8	3	13.0	7	30.4	4	17.5	1	4.3
Integrated multi-sectorial approach (n=23) as part of [b]	Infant and young child feeding programme	19	82.6	5	26.3	3	15.8	6	31.6	4	21.1	1	5.3
	Micronutrient deficiency prevention and control programme	16	69.6	6	37.5	1	6.3	5	31.2	3	18.8	1	6.2

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Anemia prevention and control programme	15	65.2	4	26.7	3	20.0	5	33.3	3	20.0	0	0.0
	Humanitarian response programme	6	26.1	2	33.3	0	0.0	2	33.3	2	33.3	0	0.0
	School feeding programme	3	13.0	1	33.3	0	0.0	1	33.3	1	33.3	0	0.0
	Other programmes	6	26.1	3	50.0	0	0.0	2	33.3	1	16.7	0	0.0

[a] No respondents reported MNP interventions planned or implemented in the Middle East and North Africa region.

[b] Multiple choice answers, totals may equal more than 100%

[c] Multiple expected outcomes (n=5) included reduce anemia and stunting (n=2); reduce iron deficiency anemia and increase awareness of MNP (n=1); reduce anemia, stunting, and increase MNP coverage (n=1); and reduce anemia, stunting and improve complementary feeding (n=1).

4.3 Organizations Supporting the Intervention, Funding Sources, Intervention Duration, and Intervention Scale among Implemented MNP Interventions

Support from multiple organizations helps to strengthen the commitment, funding, feasibility and sustainability of HF interventions. A total of 84 organizations[2] (data not shown) were listed as being involved in the 34 MNP interventions currently implemented, with an average of 4 organizations per intervention (range 1–13). Interventions were not asked to report the lead agency and this information is not available. Among these interventions, Table 4.3 shows that the most frequently mentioned organization types supporting implementation were the national government (79%), followed by multilateral organizations (65%), and local NGOs or local projects (38%). Multilateral organizations were involved in supporting the interventions across all regions. In East Asia and the Pacific and in Latin America and the Caribbean, 100% of the implemented MNP interventions reported involvement of the national government, compared to only 55% of the interventions in South Asia. Only interventions in Latin America and the Caribbean (54%) and South Asia (42%) reported involvement of local NGOs or local projects.

Funding for implemented MNP interventions was varied and came from multilateral organizations (68%), international governments/agencies (44%), national governments (24%), international NGOs (12%), and private sources (12%). Multilateral organizations and international governments/agencies provided funding to interventions across all or most regions, but only national governments in Latin America and the Caribbean provided funding for MNP interventions. Most of the interventions (94%) distribute the MNP product to intervention participants free of charge (data not shown). Two programmes in Bangladesh reported they charge participants an unsubsidized price

[2] Organization types listed generically, e.g., "NGOs," were only counted once for each intervention.

of ~.027-.037 USD per sachet. The national program in Bolivia allows the three domestic MNP manufacturers to sell MNPs to pharmacies for private sector distribution once the demand for the public sector has been met. While this is currently only occurring on a small scale, it was reported that private sector distribution in Bolivia will likely increase in the coming years.

Among currently implemented interventions, the earliest MNP intervention began in 2000; however 94% of the interventions started implementing since 2008 and the highest number (n=12) started in 2009. Between 2009 and 2011, the largest number of MNP programs began in Latin America and the Caribbean (n=13) while in sub-Saharan Africa the first two programs only started implementing in 2011.

Four programs were implementing at national scale: Mongolia, Bangladesh, Bolivia, and the Dominican Republic. More than half of the implemented MNP interventions (62%) were at sub-national scale; 38% of these programs were in South Asia and 33% in Latin American and the Caribbean. There were nine interventions at pilot level and 56% were implemented in Latin America and the Caribbean.

A total of 17 MNP interventions (50%) are expecting a final scale of distribution at the national level and 41% of these were located in South Asia and 35% in Latin America and the Caribbean. There are 16 MNP interventions (47%) expecting a final scale of distribution at the sub-national level; 44% are in Latin America and the Caribbean and 25% are in South Asia.

Table 4.3 Interventions currently distributing MNPs: Funding source, length of distribution, scale of intervention today and in the future, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia & Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Types of organizations involved in supporting the implementation of the intervention [b]	National Government	27	79.4	1	3.7	6	22.2	5	18.5	14	51.9	1	3.7
	Multilateral	22	64.7	1	4.5	6	27.3	2	9.1	11	50.0	2	9.1
	Local NGO/Project	13	38.2	0	0.0	6	42.2	0	0.0	7	53.8	0	0.0
	International NGO	5	14.7	0	0.0	3	60.0	2	40.0	0	0.0	0	0.0
	Private [c]	5	14.7	0	0.0	4	80.0	1	20.0	0	0.0	0	0.0
	Academic/research organization	2	5.9	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0
	International government /agency	2	5.9	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0

Item		Total		sub-Saharan Africa		South Asia		East Asia & Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Unidentified organization [d]	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
Funding source [b]	Multilateral organizations	23	67.6	1	4.3	9	39.1	4	17.4	7	30.4	2	8.7
	International government/ agency	15	44.1	1	6.7	4	26.7	1	6.7	9	60.0	0	0.0
	National Government	8	23.5	0	0.0	0	0.0	0	0.0	8	100	0	0.0
	International NGO	4	11.8	0	0.0	2	50.0	1	25.0	0	0.0	1	25.0
	Private	4	11.8	0	0.0	3	75.0	1	25.0	0	0.0	0	0.0
	Unidentified	2	5.9	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
Started MNP distribution	2000	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	2006	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	2008	4	11.8	0	0.0	3	75.0	1	25.0	0	0.0	0	0.0
	2009	12	35.3	0	0.0	4	33.3	1	8.3	5	41.7	2	16.7
	2010	7	20.6	0	0.0	2	28.6	1	14.3	4	57.1	0	0.0
	2011	9	26.5	2	22.2	2	22.2	1	11.1	4	44.4	0	0.0
Current scale of MNP distribution	Pilot	9	26.5	1	11.1	2	22.2	1	11.1	5	55.6	0	0.0
	Sub-National [e]	21	61.8	1	4.8	8	38.1	3	14.3	7	33.3	2	9.5
	National	4	11.8	0	0.0	1	25.0	1	25.0	2	50.0	0	0.0
Planned final scale of MNP distribution	Sub-national distribution	16	47.1	2	12.5	4	25.0	2	12.5	7	43.8	1	6.2
	National distribution	17	50.0	0	0.0	7	41.2	3	17.6	6	35.3	1	5.9
	Don't know	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Private defined as private companies, such as DSM.
[d] Reported as "partners" or "other partners"
[e] The responses for sub-national include those who self-reported sub-national as well as those who reported "other" for district level distribution and as part of a humanitarian response.

4.4 Organizations Supporting the Intervention, Funding Sources, Intervention Duration, and Intervention Scale among Planned MNP Interventions

A total of 59 organizations[3] (data not shown) were listed as being involved in the 25 planned MNP interventions, with an average of 3 organizations per intervention (range 1–9). Table 4.4 shows that among the MNP interventions being planned, 88% involved implementation support of the national government, 52% multilateral organizations, 28% involved international NGOs, and 16% local NGOs/projects. The most frequently mentioned sources of funding were multilateral organizations (68%) and international governments/agencies (48%). National governments were funding interventions in sub-Saharan Africa (n=2) and Latin American and the Caribbean (n=2). Only one planned intervention in Tanzania reported intentions to sell the MNPs with an expected subsidized cost of .02 USD per sachet.

At the time of completing the questionnaire, 68% intended to start implementation in 2011 and 32% in 2012. The planned final scale for 36% is national level distribution; 44% of these are in sub-Saharan Africa and 44% are in East Asia and the Pacific. Another 32% reported a planned final scale of sub-national distribution, with 50% of these interventions in South Asia. Some interventions (16%) have not yet defined the expected final scale of the distribution, and 16% reported the final scale of distribution will remain at the pilot level.

Table 4.4 Interventions planning to distribute MNPs: Funding source, length of distribution, scale of intervention today and in the future, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia & Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Organizations involved in supporting the implementation of the intervention [b]	National government	22	88.0	6	27.3	5	22.7	6	27.3	4	18.2	1	4.5
	Multilateral organization	13	52.0	5	38.5	1	7.7	3	23.1	4	30.8	0	0.0
	International NGO	7	28.0	4	57.1	3	42.9	0	0.0	0	0.0	0	0.0
	Local NGO/Association	4	16.0	2	50.0	2	50.0	0	0.0	0	0.0	0	0.0
	Academic/ Research	2	8.0	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0
	International Organization/ Government Agency	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Unidentified [c]	1	4.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Missing	2	8.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0

[3] Organization types listed generically, e.g., "NGOs," were only counted once for each intervention.

Item		Total		sub-Saharan Africa		South Asia		East Asia & Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
Funding source	Multilateral organizations	17	68.0	4	23.5	4	23.5	5	29.4	3	17.6	1	5.9
	International government/ agency	12	48.0	4	33.3	4	33.3	4	33.3	0	0.0	0	0.0
	National Government	4	16.0	2	50.0	0	0.0	0	0.0	2	50.0	0	0.0
	Private [d]	3	12.0	0	0.0	0	0.0	3	100	0	0.0	0	0.0
	International NGO	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0
	Unidentified	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0
	Missing	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
Planned to start distribution	2011	17	68.0	3	17.6	4	23.5	5	29.4	4	23.5	1	5.9
	2012	8	32.0	5	62.5	1	12.5	2	25.0	0	0.0	0	0.0
Planned final scale of MNP distribution	Pilot	4	16.0	2	50.0	0	0.0	1	25.0	1	25.0	0	0.0
	Sub-national distribution	8	32.0	0	0.0	4	50.0	2	25.0	1	12.5	1	12.5
	National distribution	9	36.0	4	44.4	1	11.1	4	44.4	0	0.0	0	0.0
	Not yet defined	4	16.0	2	50.0	0	0.0	2	50.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%.
[c] Reported as "partners" or "other partners".
[d] Private defined as private companies, such as DSM.

4.5 Target Groups and Numbers of Participants Reached among Implemented MNP Interventions

HF Products are relatively new interventions that have been used among multiple target groups as countries explore their use in innovative programs. As interventions are proven efficacious and effective in real world settings, countries are considering large scale distribution. Among the MNP interventions currently implemented, the most frequently reported was for children 6-59 months of age (41%) (See Table 4.5); these interventions were implemented in Latin America and the Caribbean (64%) and South Asia (36%). Another 38% reported interventions for children 6-23 months. These interventions were implemented across four regions including, East Asia and the Pacific (39%), South Asia (31%), Latin America and the Caribbean (15%), and Central and Eastern Europe (15%). A smaller number of interventions reported other groups including 6-36 months of age (9%), school aged children (9%), and 12-24 months of age (3%).

Worldwide, implemented MNP interventions reportedly reached 12.5 million participants in 2010 and 14.1 million participants were expected to be reached in 2011. Table 4.5 shows the wide range of participants reached by the MNP intervention in 2010 (0 to >500,000) and 2011 (<1000 to > 500,000). A large percentage of interventions had not yet started implementing in 2010 (27%) or left the response blank (15%), but 15% reached between 1 < 10,000 participants, 15% reached 10,000 < 25,000 participants, and 15% reached 100,000-500,000 participants. One intervention in South Asia and another in East Asia and the Pacific reached over 500,000 participants, with the intervention in Bangladesh targeting children 6-59 months reported reaching 11 million participants in 2010 and expected to reach 10 million in 2011. For 2011, 24% of the interventions expected to reach 100,000 < 500,000 participants with most of these interventions in South Asia (38%) or Latin America and the Caribbean (38%). Another 21% expected to reach less than 10,000 participants and 18% expected to reach 25,000 <50,000 participants in 2011.

Table 4.5 Interventions currently distributing MNPs: Target groups and the number of participants reached in 2010 and expected in 2011, by region [a] , Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Target Group [b, c]	6-23 months	13	38.2	0	0.0	4	30.8	5	38.5	2	15.4	2	15.4
	6-36 months	3	8.8	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0
	6-59 months	14	41.2	0	0.0	5	35.7	0	0.0	9	64.3	0	0.0
	12-24 months	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	School-age children	3	8.8	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
Number of participants reached by intervention in 2010 [b, d]	Not yet distributing in 2010	9	26.5	2	22.2	2	22.2	1	11.1	4	44.4	0	0.0
	1<1000	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
	1,000 < 10,000	3	8.8	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0
	10,000 < 25,000	5	14.7	0	0.0	2	40.0	1	20.0	1	20.0	1	20.0
	25,000 < 100,000	3	8.8	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3
	100,000 < 500,000	5	14.7	0	0.0	3	60.0	0	0.0	2	40.0	0	0.0
	≥500,000	2	5.9	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Missing	5	14.7	0	0.0	0	0.0	2	40.0	3	60.0	0	0.0
Number of participants expected to be reached in 2011 [c, e]	1<1000	4	11.8	0	0.0	0	0.0	0	0.0	4	100	0	0.0
	1,000 < 10,000	3	8.8	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0
	10,000 < 25,000	4	11.8	0	0.0	2	50.0	1	25.0	1	25.0	0	0.0
	25,000 < 100,000	6	17.6	1	16.7	3	50.0	1	16.7	0	0.0	1	16.7
	100,000 < 500,000	8	23.5	1	12.5	3	37.5	0	0.0	3	37.5	1	12.5
	≥500,000	4	11.8	0	0.0	1	25.0	1	25.0	2	50.0	0	0.0
	Missing	5	14.7	0	0.0	1	20.0	2	40.0	2	40.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] In 2010, implemented MNP interventions expected to reach: 11,368,633 children 6-59 months; 939,677 children 6-23 months; 137,000 children 6-36 months; 37,000 school age children; 576 children 12-24 months.
[c] In 2011, implemented MNP interventions expected to reach: 12,441,696 children 6-59 months; 1,264,507 children 6-23 months; 278,400 school age children; 145,197 children 6-36 months; 547 children 12-24 months.
[d] In 2010, implemented MNP interventions expected to reach the following number of participants in each region: 11,496,785 South Asia; 529,692 East Asia and Pacific; 363,409 Latin America & the Caribbean; 93,000 Central & Eastern Europe; not reported sub-Saharan Africa.
[e] In 2011, implemented MNP interventions expected to reach the following number of participants in each region: 10,662,906 South Asia; 2,300,168 Latin America & the Caribbean; 603,873 East Asia and Pacific; 330,000 Central & Eastern Europe; 233,400 sub-Saharan Africa.

4.6 Target Groups and Numbers of Participants Reached among Planned MNP Interventions

Table 4.6 shows 68% of planned MNP interventions were for children 6-23 months of age and 16% were for children 6-59 months of age. This may reflect the recent strategic focus of many agencies to target interventions to the *first 1000 days*, including pregnancy and the first two years of life. Interventions for children 6-23 months of age were planned across all regions including sub-Saharan Africa (29%), South Asia (29%), East Asia and the Pacific (24%), Latin America the Caribbean (12%), and Central and Eastern Europe (6%). Planned interventions for children 6-59 months were reported in sub-Saharan Africa (50%) and Latin America and the Caribbean (50%). Other target groups include interventions for children 6-36 months (8%) in East Asia and the Pacific and interventions for school-age children (8%) sub-Saharan Africa and East Asia and the Pacific.

A total of 20% of planned MNP interventions expected to reach 100,000 < 500,000 participants, 20% expected to reach 25,000 < 100,000 participants, and 20% expected to reach less than 25,000 participants.

Table 4.6 Interventions planning to distribute MNPs: Target groups and the number of participants reached in 2010 and expected in 2011, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Target Group	6-23 months	17	68.0	5	29.4	5	29.4	4	23.5	2	11.8	1	5.9
	6-36 months	2	8.0	0	0.0	0	0.0	2	100	0	0.0	0	0.0
	6-59 months	4	16.0	2	50.0	0	0.0	0	0.0	2	50.0	0	0.0
	School-age children	2	8.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0
Number of participants expected to be reached in 2011	Not yet distributing MNP in 2011	8	32.0	5	62.5	1	12.5	2	25.5	0	0.0	0	0.0
	<1000	1	4.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
	1,000 < 10,000	3	12.0	0	0.0	2	66.7	0	0.0	1	33.3	0	0.0
	10,000 < 25,000	1	4.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	25,000 < 100,000	5	20.0	2	40.0	1	20.0	1	20.0	1	20.0	0	0.0
	100,000 < 500,000	5	20.0	1	20.0	1	20.0	3	60.0	0	0.0	0	0.0
	≥500,000	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Missing	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.

4.7 MNP Formulation, Iron Compounds, MNP Registrations and Approvals among Implemented MNP Interventions

Multiple MNP formulations have been reported in the literature and used in programmatic and research settings. Appendix D shows the formulations of vitamins and minerals and quantities of each as reported for MNP interventions. Table 4.7 shows that among the implemented interventions, 44% reported use of the five MNP formulation (iron, zinc, folic acid, and vitamins A and C), which is sometimes referred to as the “anemia formulation.” This was reported most commonly (73%) by interventions in Latin America and the Caribbean. Another 38% of the interventions reported use of the Standard 15 formulation (iron, zinc, folic acid, copper, selenium, iodine, and vitamins A, D, E, C, B1, B2, B3, B6, B12) put forth in the 2007 joint statement by WHO,

WFP and UNICEF for emergency situations (WHO, WFP, & UNICEF 2007), but widely used outside of emergencies as well. Among these interventions, 46% were in South Asia, 23% in East Asia and the Pacific, and 23% in Latin America and the Caribbean. Among the three school interventions (9%), two formulations were reported (Appendix D). Another three interventions (9%) reported a different formulation.

The iron compound in the formulation influences iron bioavailability and absorption and a variety of iron compounds have been reported in the literature (HF-TAG forthcoming). Most interventions (77%) reported use of microencapsulated ferrous fumarate. Among those interventions, 46% were in Latin America and the Caribbean, 31% in South Asia, 15% in East Asia and the Pacific, and 8% in Central and Eastern Europe. Another 9% of the interventions (all in South Asia) reported “other” for the iron compound, 12% reported they did not know, and one intervention in sub-Saharan Africa reported use of sodium iron ethylenediaminetetraacetic acid (NaFeEDTA).

Registrations and government approvals reflect the need and/or requirement for interventions to follow country policies related to the distribution of HF products. Among the implemented MNP interventions, 65% indicated the MNP was registered in the country and 55% of these were interventions in Latin American and the Caribbean. Among the 32% of interventions that reported MNPs were not registered, 64% were in South Asia. When home fortification products are registered, it may influence how the products may legally be distributed, particularly when registered as a pharmaceutical which might limit distribution to organizations permitted to distribute medicines, such as health facilities or pharmacies. Among the interventions reporting MNPs were registered in the country, 36% registered MNPs as a pharmaceutical, 36% as a nutritional supplement, and 27% as a food. Among those that registered MNP as a pharmaceutical, 50% were in South Asia, while 50% of those that registered the MNP as a nutritional supplement were in Latin America and the Caribbean.

In 82% of the implemented MNP interventions, the government was reported to have approved the use of the MNP in the country. Examples of government approval included an ethical clearance, proof of safety review, or establishing a standard. Another 9% reported the government was undertaking a review process to approve the MNP, and another 9% stated the government did not formally approve the use of the MNP in the country.

Table 4.7 Interventions currently distributing MNPs: MNP Formulation, iron compounds, MNP country registration and government approvals, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
MNP formulation	5- MNP [b]	15	44.1	0	0.0	3	20.0	0	0.0	11	73.3	1	6.7
	15- MNP [c]	13	38.2	0	0.0	6	46.2	3	23.1	3	23.1	1	7.7
	School Formulation	3	8.8	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
	Other	3	8.8	0	0.0	1	33.3	2	66.7	0	0.0	0	0.0
Iron compound in the formulation	Microencapsulated Ferrous fumarate	26	76.5	0	0.0	8	30.8	4	15.4	12	46.2	2	7.7
	NaFeEDTA [d]	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Other	3	8.8	0	0.0	3	100	0	0.0	0	0.0	0	0.0
	Don't know	4	11.8	1	25.0	0	0.0	1	25.0	2	50.0	0	0.0
MNP registered in the country	Yes	22	64.7	1	4.5	4	18.2	3	13.6	12	54.5	2	9.1
	No	11	32.4	1	9.1	7	63.6	1	9.1	2	18.2	0	0.0
	Under government review	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
Registration category (n=22)	Pharmaceutical	8	36.4	0	0.0	4	50.0	0	0.0	3	37.5	1	12.5
	Nutritional supplement	8	36.4	1	12.5	0	0.0	2	25.0	4	50.0	1	12.5
	Food	6	27.3	0	0.0	0	0.0	1	16.7	5	83.3	0	0.0
Government approval for MNP use in country [e]	Yes	28	82.4	1	3.6	10	35.7	4	14.3	11	39.3	2	7.1
	No	3	8.8	1	33.3	1	33.3	0	0.0	1	33.3	0	0.0
	Under government review	3	8.8	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.

[b] Anemia formulation of 5 micronutrients includes iron, zinc, folic acid, vitamins A and C.

[c] Standard multiple micronutrient formulation of 15 micronutrients includes vitamins A, D, E, C, B1, B2, B3, B6, B12, folic acid, iron, zinc, copper, selenium, and iodine as recommended in the WHO, WFP, UNICEF 2007 joint statement .

[d] Sodium iron ethylenediaminetetraacetic acid (NaFeEDTA).

[e] Government approval for use of MNP in country may include an ethical clearance, proof of safety, or standard established.

4.8 MNP Formulation, Iron Compounds, MNP Registrations and Approvals among Planned MNP Interventions

Among the 25 interventions planning to implement MNP interventions, 44% expect to use the 15-MNP formulation (iron, zinc, folic acid, copper, selenium, iodine, and vitamins A, D, E, C, B1, B2, B3, B6, B12) and 46% of these interventions are located in East Asia and the Pacific. Another 24% expect to use the five formulation (iron, zinc, folic acid, and vitamins A and C), and 67% of these interventions are located in South Asia (Table 4.8). A large proportion of the planned interventions (28%) also left this question blank; these interventions were primarily located in sub-Saharan Africa (86%). One intervention in Indonesia is a school program using a school formulation. Appendix D includes the quantities for each nutrient in the MNP formulations as reported by the interventions.

The iron compound to be used in 52% of the interventions is microencapsulated ferrous fumarate and 12% report they will use sodium iron ethylenediaminetetraacetic acid (NaFeEDTA). Among the interventions using ferrous fumarate, 39% are in South Asia, 23% are in Latin America and the Caribbean.

The MNP is registered in the country for 40% of the planned MNP interventions, and it is not registered in another 40%. Among the countries that registered the MNP, 60% were registered as a food, 30% as a pharmaceutical, and 10% as a nutritional supplement. All of the interventions that registered the MNP as a pharmaceutical were in South Asia. Among the planned interventions, 56% reported the government gave approval for use of the MNP in the country (for example, after an ethical review, proof of safety review, or establishing a standard), 20% were currently under government review, and 16% reported the government did not officially give approval for use of the MNP.

Table 4.8 Interventions planning to distribute MNPs: MNP Formulation, iron compounds, MNP country registration and government approvals, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
MNP formulation	5 - MNP [b]	6	24.0	0	0.0	4	66.7	0	0.0	2	33.3	0	0.0
	15 - MNP [c]	11	44.0	2	18.2	1	9.1	5	45.5	2	18.2	1	9.1
	School	1	4.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Missing	7	28.0	6	85.7	0	0.0	1	14.3	0	0.0	0	0.0
Iron compound in the formulation	Microencapsulated Ferrous fumarate	13	52.0	2	15.4	5	38.5	2	15.4	3	23.1	1	7.7
	NaFeEDTA [d]	3	12.0	0	0.0	0	0.0	3	100	0	0.0	0	0.0
	Other	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central & Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Don't know	8	32.0	5	62.5	0	0.0	2	25.0	1	12.5	0	0.0
MNP registered in the country	Yes	10	40.0	1	10.0	4	40.0	2	20.0	3	30.0	0	0.0
	No	10	40.0	3	30.0	1	10.0	4	40.0	1	10.0	1	10.0
	Under review/in process	3	12.0	2	66.7	0	0.0	1	33.3	0	0.0	0	0.0
	Unknown	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0
Registration category	Food	6	60.0	0	0.0	1	16.7	2	33.3	3	50.0	0	0.0
	Pharmaceutical	3	30.0	0	0.0	3	100	0	0.0	0	0.0	0	0.0
	Nutritional supplement	1	10.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
Government approval for MNP use in country [e]	Yes	14	56.0	1	7.1	5	35.7	4	28.6	4	28.6	0	0.0
	No	4	16.0	2	50.0	0	0.0	1	25.0	0	0.0	1	25.0
	Under review/in process	5	20.0	3	60.0	0	0.0	2	40.0	0	0.0	0	0.0
	Unknown	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Standard anemia formulation of 5 micronutrients includes iron, zinc, folic acid, vitamins A and C.
[c] Standard multiple micronutrient formulation of 15 micronutrients includes vitamins A, D, E, C, B1, B2, B3, B6, B12, folic acid, iron, zinc, copper, selenium, and iodine.
[d] Sodium iron ethylenediaminetetraacetic acid (NaFeEDTA)
[e] Government approval for use of MNP in country may include an ethical clearance, proof of safety, or standard established.

4.9 MNP Procurement, Manufacturers, Patents, and Quality among Implemented MNP Interventions

Table 4.9 shows that UNICEF (35%), the World Food Programme (32%), and Governments (15%) procure most of the MNP for the 34 implemented interventions. For the UNICEF procurements, 50% were for interventions in South Asia, while for the World Food Programme 55% were for interventions in Latin America and the Caribbean. Among government procurements, 60% were also for interventions in Latin America and the Caribbean and 40% for interventions in East Asia and the Pacific.

Interventions aim to procure HF products from manufacturers that meet quality standards and offer the best price. Manufacturing part or the entire HF product in country usually lowers the cost; however, quality manufacturing standards need to be maintained. The MNP product was partly or

entirely manufactured locally in country for 44% of the interventions; 60% of these interventions were in Latin America and the Caribbean. DSM was the most frequently mentioned product manufacturer (59%) but a total of six manufacturers were mentioned at least once. In addition, eight interventions across almost all regions reported having more than one MNP manufacturer in the past (data not shown); in four of these cases the interventions mentioned manufacturers not in Table 4.9: Manisha, SIGMA, INTI, and Tigar Pilar Sejahter.

Interventions may decide to protect the MNP product with a patent or other legal instrument to prevent other organizations from using the MNP product, name, or logo for other purposes or without permission. Table 4.9 also shows that 38% of the implemented interventions reported their MNP product is protected by a patent or other legal instrument, 32% reported it is not, and 29% did not know.

In addition to safety concerns, problems with the quality of MNPs can damage the credibility and acceptability of the MNP intervention among the target population. Furthermore the later in the distribution system problems are identified, the higher the cost to recall the product. For these reasons, it is important to identify any problems with the MNP quality as soon as possible. Many interventions (71%) reported they have a protocol in place to check the quality of the MNPs; with most of these interventions (83%) in South Asia and Latin America and the Caribbean. A total of 24% of the interventions reported ever experiencing any problems with the quality of MNPs, with 63% of those reporting problems in Latin American and the Caribbean. Descriptions of MNP problems with quality included: defective packaging (n=4); unpleasant, strong metallic taste (n=2); changes in MNP color (n=1); crumbled powder (n=1); and iron particles too large (n=1).

Table 4.9 Interventions currently distributing MNPs: MNP Procurement, manufacture, patents and quality, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		East and Central Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
MNP procurement	UNICEF	12	35.3	0	0.0	6	50.0	2	16.7	2	16.7	2	16.7
	World Food Programme	11	32.4	2	18.2	3	27.3	0	0.0	6	54.5	0	0.0
	Government	5	14.7	0	0.0	0	0.0	2	40.0	3	60.0	0	0.0
	Other	4	11.8	0	0.0	2	50.0	1	25.0	1	25.0	0	0.0
	Missing	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
MNP product partly or entirely manufactured locally in country	Yes	15	44.1	0	0.0	4	26.7	2	13.3	9	60.0	0	0.0
	No	19	55.9	2	10.5	7	36.8	3	15.8	5	26.3	2	10.5

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		East and Central Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
Product manufacturer	DSM	20	58.8	2	10.0	6	30.0	3	15.0	8	40.0	1	5.0
	Renata	4	11.8	0	0.0	4	100	0	0.0	0	0.0	0	0.0
	Piramal	3	8.8	0	0.0	1	33.3	0	0.0	1	33.3	1	33.3
	Hexagon	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
	Heinz	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Laboratorios LAFAR (Guatemala)	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	Missing	3	8.8	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0
MNP protected by patent or other legal arrangement	Yes	13	38.2	0	0.0	3	23.1	3	23.1	6	46.2	1	7.7
	No	11	32.4	0	0.0	4	36.4	1	9.1	5	45.5	1	9.1
	Don't know	10	29.4	2	20.0	4	40.0	1	10.0	3	30.0	0	0.0
Intervention has protocol to check quality of MNPs	Yes	24	70.6	1	4.2	10	41.7	1	4.2	10	41.7	2	8.3
	No	8	23.5	1	12.5	1	12.5	3	37.5	3	37.5	0	0.0
	Don't know	2	5.9	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
Intervention ever experienced any problems with the quality of MNPs	Yes	8	23.5	0	0.0	2	25.0	1	12.5	5	62.5	0	0.0
	No	21	61.8	2	9.5	6	28.6	2	9.5	9	42.9	2	9.5
	Don't know	5	14.7	0	0.0	3	60.0	2	40.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.

4.10 MNP Procurement, Manufacturers, Patents, and Quality among Planned MNP Interventions

In Table 4.10, UNICEF was expected to procure MNPs for 64% of planned MNP interventions, and WFP for 16% of planned interventions. A total of 32% of planned interventions reported the MNP will be partly or entirely manufactured in country, with 50% of these interventions in South Asia. DSM was the most frequently mentioned MNP manufacturer for planned interventions (44%), with most (73%) of these interventions in East Asia and the Pacific and Latin American and the Caribbean. More than one third of the interventions had not yet identified the manufacturer, with 67% of these interventions in sub-Saharan Africa and 33.3% in East Asia and the Pacific. Almost half of the planned interventions (48.0%) did not know if the MNP product was protected by a patent or other legal

instrument and 40.0% reported it was protected. Among those reporting it was protected, 50% were in South Asia. A total of 28% of planned interventions reported they have a protocol to check the quality of MNPs and 57% of these interventions are in South Asia, while 48% did not know if they have a protocol to check MNP quality.

Table 4.10 Interventions planning to distribute MNPs: MNP Procurement, manufacture, patents and quality, by region, [a] **Home Fortification Global Assessment 2011**

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		East and Central Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
MNP procurement	UNICEF	16	64.0	5	31.2	4	25.0	4	25.0	2	12.5	1	6.2
	World Food Programme	4	16.0	1	25.0	0	0.0	2	50.0	1	25.0	0	0.0
	Government	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0
	Micronutrient Initiative	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Other	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
MNP product partly or entirely manufactured locally in country	Yes	8	32.0	0	0.0	4	50.0	2	25.0	2	25.0	0	0.0
	No	17	68.0	8	47.1	1	5.9	5	29.4	2	11.8	1	5.9
Product manufacturer	DSM	11	44.0	1	9.1	1	9.1	4	36.4	4	36.4	1	9.1
	Renata	3	12.0	0	0.0	3	100	0	0.0	0	0.0	0	0.0
	Piramal	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Genera Pharmaceuticals	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Not yet identified	9	36.0	6	66.6	0	0.0	3	33.3	0	0.0	0	0.0
Product protected by patent or other legal arrangement	Yes	10	40.0	1	10.0	5	50.0	2	20.0	1	10.0	1	10.0
	No	3	12.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0
	Don't know	12	48.0	7	58.3	0	0.0	5	41.7	0	0.0	0	0.0
Intervention has protocol to check quality of MNPs	Yes	7	28.0	0	0.0	4	57.1	0	0.0	3	42.9	0	0.0
	No	6	24.0	3	50.0	1	16.7	1	16.7	1	16.7	0	0.0
	Don't know	12	48.0	5	41.6	0	0.0	6	50.0	0	0.0	1	8.4

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East & North Africa region.

4.11 MNP Packaging, Distribution, and Recommended Intake among Implemented MNP Interventions

Because participants usually receive multiple MNP sachets at one time, packaging (usually a box or bag) to carry the sachets often needs to be considered. In Table 4.11, most implemented MNP interventions (79%) reported they package the sachets in a box for distribution, with 41% of these interventions in South Asia and 37% in Latin America and the Caribbean. Another 15% reported they package the sachets in a bag; 60% of these interventions were in Latin America and the Caribbean. The most frequently reported quantity of MNPs sachets distributed per bag or box was 30 sachets (79%). Another 9% reported distributing 15 sachets per bag or box. Two interventions (6%) reported distributing more than ≥100 MNP sachets per bag or box.

Interventions reported multiple MNP distribution channels. The most frequently mentioned included health facilities (50%), community-based distributions (41%), scheduled events (24%), and early childhood development centers (15%). For health facility distribution, 41% of the interventions were in Latin American and the Caribbean, 24% were in South Asia and another 24% were in East Asia and the Pacific. Among the interventions reporting community-based distribution, 43% were in South Asia and another 43% were in Latin American and the Caribbean. For the interventions using scheduled health facility distributions, 50% were located in East Asia and the Pacific. All of the interventions reporting distribution through early Childhood development centers were in Latin American and the Caribbean.

Interventions reported a variety of MNP distribution schedules including every month (35%), every six months (21%), every two months (12%), every three months (12%), and other schedules (21%). Among the interventions with distribution every month or every six months, 50% and 57%, respectively, were in Latin America and the Caribbean. At each distribution, participants were most likely to receive either 60 sachets (32%), 30 sachets (18%) or 15 sachets (18%). Most interventions distributing 60 sachets were in Latin America and the Caribbean (73%).

See Figure 4.3 for a description of the frequency of MNP distribution, quantity distributed, and suggested intake schedules for each of the 34 interventions. Implemented interventions reported prescribed and flexible intake regimens. A prescribed regimen asks participants to consume the MNPs according to a specific schedule that indicates how many sachets to consume a day or week, such as take daily or every other day until finished. Flexible regimens typically ask participants to consume the MNPs any way they choose (usually no more than one a day, although this might vary based on the formulation) as long as they are consumed within a given time frame (e.g., 4 or 6 months). Daily intake (56%) was the most frequently recommended intake schedule (Table 4.11). Others included MNP intake five days a week (18%), every other day (15%) and flexible regimens (9%). Among those recommending daily intake, 58% were in Latin America and the Caribbean and 26% in South Asia. Appendix E summarizes the MNP regimen for each intervention by country and target group, and describes the distribution method, frequency of distribution to participants, number of sachets given to participants at each distribution, recommended MNP intake schedule, and the MNP formulation.

Table 4.11 Interventions currently distributing MNPs: MNP packaging, distribution and recommended MNP intake, by region, [a] **Home Fortification Global Assessment 2011**

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
MNP packaging for distribution	Box	27	79.4	2	7.4	11	40.7	3	11.1	10	37.0	1	3.7
	Bag	5	14.7	0	0.0	0	0.0	1	20.0	3	60.0	1	20.0
	No packaging	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Missing	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
Number units per package (box, bag)	15 sachets	3	8.8	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0
	20 sachets	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	30 sachets	27	79.4	0	0.0	10	37.0	4	14.8	11	40.7	2	0.0
	≥ 100 sachets	2	5.8	1	50.0	1	50.0	0	0.0	0	0.0	0	7.4
	Missing	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
MNP distributed through[b]	Health facility	17	50.0	0	0.0	4	23.5	4	23.5	7	41.2	2	11.8
	Community-based[c]	14	41.2	0	0.0	6	42.9	2	14.3	6	42.9	0	0.0
	Scheduled health facility events[d]	8	23.5	0	0.0	1	12.5	4	50.0	3	37.5	0	0.0
	Early childhood development centers	5	14.7	0	0.0	0	0.0	0	0.0	5	100	0	0.0
	General food distribution	4	11.8	0	0.0	1	25.0	0	0.0	3	75.0	0	0.0
	School meals	3	8.8	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
	Market based[e]	3	8.8	0	0.0	2	66.6	0	0.0	1	33.3	0	0.0
Frequency of distribution of MNPs to participants	Monthly	12	35.3	0	0.0	2	16.7	3	25.0	6	50.0	1	8.3
	Every six months	7	20.6	0	0.0	2	28.6	1	14.3	4	57.1	0	0.0
	Every two months	4	11.8	0	0.0	2	50.0	1	25.0	0	0.0	1	25.0
	Every three months	4	11.8	1	25.0	2	50.0	0	0.0	1	25.0	0	0.0
	Other [f]	7	20.6	1	14.3	3	42.9	0	0.0	3	42.9	0	0.0

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
Number of sachets given at each distribution	60	11	32.4	0	0.0	2	18.2	1	9.1	8	72.7	0	0.0
	30	6	17.6	0	0.0	2	33.3	1	16.7	2	33.3	1	16.7
	15	6	17.6	0	0.0	2	33.3	2	33.3	2	33.3	0	0.0
	Sachets sold, buyer determines	2	5.9	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0
	MNP prepared in school meals & not distributed	2	5.9	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0
	Other [g]	5	14.7	1	20	2	0.4	1	20	1	20	0	0.0
	Missing	2	5.9	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0
Recommended MNP intake schedule	1 sachet per day	19	55.9	2	10.5	5	26.3	0	0.0	11	57.9	1	5.3
	Every other day	6	17.6	0	0.0	3	50.0	1	16.7	2	33.3	0	0.0
	5 sachets per week	6	17.6	0	0.0	1	16.7	3	50.0	1	16.7	1	16.7
	Flexible	3	8.8	0	0.0	2	66.7	1	33.3	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of community-based include groups or house visits and community events.
[d] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[e] Examples of market based include selling in communities through volunteers or private sector including shops, pharmacies, and drug stores.
[f] Responses include variable (n=2), daily (n=1), weekly (n=1), every 8 months (n=1) available at pharmacies at all times (n=1), and depending on demand (n=1).
[g] Responses include variable (n=1), 20 sachets (n=1), 90 sachets (n=2), and 120 sachets (n=1).

Figure 4.3 Implemented MNP interventions, frequency of MNP distribution, quantity distributed, and suggested intake schedule, Home Fortification Global Assessment 2011

<table>
<tr><th>Implemented MNP interventions (N= 34)[a]</th><th>Frequency of distribution</th><th>Quantity</th><th>Suggested intake</th></tr>
<tr><td>1</td><td rowspan="12">Monthly</td><td rowspan="6">15 sachets</td><td rowspan="6">1 sachet every other day</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td><td>20 sachets</td><td>5 sachets per week</td></tr>
<tr><td>8</td><td rowspan="2">30 sachets</td><td rowspan="2">1 sachet daily</td></tr>
<tr><td>9</td></tr>
<tr><td>10</td><td rowspan="2">60 sachets [b]</td><td>1 sachet daily Mon-Fri [b]</td></tr>
<tr><td>11</td><td>1 sachet daily [b]</td></tr>
<tr><td>12</td><td>Missing</td><td>1 sachet daily</td></tr>
<tr><td>13</td><td rowspan="4">Every 2 months</td><td rowspan="4">30 sachets</td><td rowspan="2">1 sachet every other day</td></tr>
<tr><td>14</td></tr>
<tr><td>15</td><td rowspan="2">Flexible [c]</td></tr>
<tr><td>16</td></tr>
<tr><td>17</td><td rowspan="4">Every 3 months</td><td>60 sachets</td><td rowspan="4">1 sachet daily</td></tr>
<tr><td>18</td><td rowspan="3">90 sachets</td></tr>
<tr><td>19</td></tr>
<tr><td>20</td></tr>
<tr><td>21</td><td rowspan="7">Every 6 months</td><td rowspan="7">60 sachets</td><td rowspan="6">1 sachet daily [d]</td></tr>
<tr><td>22</td></tr>
<tr><td>23</td></tr>
<tr><td>24</td></tr>
<tr><td>25</td></tr>
<tr><td>26</td></tr>
<tr><td>27</td><td>1 sachet daily followed by a 4 month gap or 1 sachet every 3 days</td></tr>
<tr><td>28</td><td>Every 8 months</td><td>60 sachets</td><td>1 sachet daily [e]</td></tr>
<tr><td>29</td><td>Per meal/per day</td><td>MNP mixed into school meals</td><td>Equivalent of 1 sachet daily</td></tr>
<tr><td>30</td><td>2 or 5 days a week</td><td>MNP mixed into school meals</td><td>Equivalent of 1 sachet daily</td></tr>
<tr><td>31</td><td>Variable</td><td>MNP mixed into school meals</td><td>1 sachet daily</td></tr>
<tr><td>32</td><td>Variable</td><td>MNP mixed into school meals</td><td>1 sachet daily</td></tr>
<tr><td>33</td><td>Demand based/for sale</td><td rowspan="2">Recommend 60 sachets at one time to cover a 2-4 month period</td><td rowspan="2">1 sachet daily</td></tr>
<tr><td>34</td><td>Demand based/for sale</td></tr>
</table>

[a] Each row in the first column represents one of the 34 implemented MNP interventions; read across each row for the frequency of distribution, quantity distributed, and suggested MNP intake for that specific intervention.
[b] Intervention #10 and #11 reported distribution of 60 sachets on a monthly basis with intake of 1 sachet every day, or daily Monday to Friday. This regimen is unusual because more sachets are reported to be distributed than are needed; there was no other information provided and may have been reported incorrectly.
[c] Flexible is not further defined by the intervention
[d] The questionnaire did not explicitly ask for information about gaps in the regimen. We assume the respondent means daily use for 2 months followed by a 4 month gap.
[e] The questionnaire did not explicitly ask for information about gaps in the regimen. We assume the respondent means daily use for 2 months followed by a 6 month gap.

4.12 MNP Packaging, Distribution, and Recommended Intake among Planned MNP Interventions

Among the planned MNP interventions, 64% reported MNPs will be distributed in boxes (Table 4.12). For 60% of the interventions, 30 sachets will be distributed per package (box, bag). There are multiple MNP distribution methods planned with 44% reporting community-based distribution, 40% through health facilities, 16% through scheduled events, and 12% as part of general food distributions. Another 40% reported another distribution channel; the interventions providing details described distribution through early childhood development centers (n=2), school meals (n=2), community management of acute malnutrition activities (n=1), market-based distribution (n=1), and women's federations (n=1).

Figure 4.4 describes the frequency of MNP distribution, quantity distributed, and suggested intake schedules for each of the 25 planned interventions. Table 4.12 shows that 28% of planned interventions will distribute MNPs to participants every month. Another 44% of the interventions reported another distribution schedule, such as every two months, three months or six months (n=1 or 2 for these options), or did not describe the "other" response. Interventions reported plans to distribute 30 sachets at each distribution (40%) or in three cases (12%) reported another quantity (15, 60, and 90 sachets). The school programs (8%) will not distribute sachets as the MNPs are consumed already mixed into school lunches.

Among planned interventions, the recommended MNP intakes will be one sachet per day (36%), multiple options/flexible intake (20%), or five sachets a week (8%). Examples of giving participants multiple options include recommending a choice of either daily intake (with a break of several months before re-starting daily intake) *or* every other day over a given time period, as well as suggesting daily intake (with a break) *or* flexible intake over a given time period with no explicit regimen except to consume all of the MNPs within the set time period.

Table 4.12 Interventions planning to distribute MNPs: MNP packaging, distribution and recommended MNP intake, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
MNP packaging for distribution	Box	16	64.0	2	12.5	5	31.2	5	31.2	3	18.8	1	6.2
	Bag	1	4.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	Missing	8	32.0	6	75.0	0	0.0	2	25.0	0	0.0	0	0.0
Number units per package (box, bag)	30 sachets	15	60.0	0	0.0	5	33.3	5	33.3	4	26.7	1	6.7
	Missing	10	40.0	8	80.0	0	0.0	2	20.0	0	0.0	0	0.0
MNP distributed through [b]	Community-based [c]	11	44.0	1	9.1	5	45.5	3	27.3	2	18.2	0	0.0
	Health facility	10	40.0	1	10.0	1	10.0	5	50.0	2	20.0	1	10.0
	Scheduled health facility events [d]	4	16.0	0	0.0	0	0.0	4	100	0	0.0	0	0.0
	General food distribution	3	12.0	0	0.0	0	0.0	3	100	0	0.0	0	0.0
	Other [e]	10	40.0	4	40.0	0	0.0	4	40.0	2	20.0	0	0.0
Frequency of distribution of MNPs to participants	Once a month	7	28.0	1	14.3	1	14.3	2	28.6	2	28.6	1	14.3
	Other [f]	11	44.0	5	45.5	4	36.4	1	9.1	1	9.1	0	0.0
	Missing	7	28.0	2	28.5	0	0.0	4	57.1	1	14.3	0	0.0
Number of sachets given at each distribution	30	10	40.0	2	20.0	3	30.0	2	20.0	2	20.0	1	10.0
	Other	3	12.0	0	0.0	2	66.7	1	33.3	0	0.0	0	0.0
	MNP prepared in school meals & not distributed	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
	Missing	10	40.0	6	60.0	0	0.0	3	30.0	1	10.0	0	0.0
Recommended MNP intake schedule	1 sachet per day	9	36.0	2	22.2	2	22.2	1	11.1	3	33.3	1	11.1
	Multiple options/ Flexible	5	20.0	2	40.0	3	60.0	0	0.0	0	0.0	0	0.0
	5 sachets per week	2	8.0	0	0.0	0	0.0	2	100	0	0.0	0	0.0
	Missing	9	36.0	4	44.4	0	0.0	4	44.4	1	11.1	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East & North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of community-based include groups or house visits and community events.
[d] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[e] Planned interventions providing details described distribution through early childhood development centers (n=2), school meals (n=2), community management of acute malnutrition activities (n=1), market-based distribution (n=1), and women's federations (n=1).
[f] Planned interventions providing details described frequency of distribution of MNPs to participants as once every six months (n=2), once every three months (n=1), once every two months (n=1), once in the duration of the project (n=1), three times per week (n=1), and daily (n=1).

Figure 4.4 Planned MNP interventions, frequency of MNP distribution, quantity distributed, and suggested intake, Home Fortification Global Assessment 2011

<table>
<tr><th>Implemented MNP interventions (N= 34)[a]</th><th>Frequency of distribution</th><th>Quantity</th><th>Suggested intake</th></tr>
<tr><td>1</td><td rowspan="7">Monthly</td><td>15 sachets</td><td>1 sachet every other day</td></tr>
<tr><td>2</td><td rowspan="9">30 sachets</td><td rowspan="6">1 sachet daily</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td></tr>
<tr><td>8</td><td rowspan="2">Every 2 months</td><td rowspan="2">Flexible [b]</td></tr>
<tr><td>9</td></tr>
<tr><td>10</td><td>Every 3 months</td><td>Missing</td></tr>
<tr><td>11</td><td rowspan="2">Every 6 months</td><td>60 sachets</td><td>1 sachet daily [c]</td></tr>
<tr><td>12</td><td>90 sachets</td><td>90 sachets over 6 months</td></tr>
<tr><td>13</td><td>Once during project duration</td><td>Missing</td><td>1 sachet daily</td></tr>
<tr><td>14</td><td>Prepared and served in school</td><td>Prepared with school meals and served</td><td>1 sachet daily</td></tr>
<tr><td>15</td><td>Distributed to school 3x/week</td><td>Multi dose sachets to schools</td><td>1 meal/ 3x/ week</td></tr>
<tr><td>16</td><td>Demand based/for sale</td><td rowspan="9">Missing</td><td rowspan="10">Missing</td></tr>
<tr><td>17</td><td rowspan="9">Missing</td></tr>
<tr><td>18</td></tr>
<tr><td>19</td></tr>
<tr><td>20</td></tr>
<tr><td>21</td></tr>
<tr><td>22</td></tr>
<tr><td>23</td></tr>
<tr><td>24</td></tr>
<tr><td>25</td><td>30 sachets</td></tr>
</table>

[a] Each row in the first column represents one of the 25 planned MNP interventions; read across each row for the frequency of distribution, quantity distributed, and suggested MNP intake for that specific intervention.
[b] Flexible is not further defined by the intervention
[c] The questionnaire did not explicitly ask for information about gaps in the regimen. We assume the respondent means daily use for 2 months followed by a 4 month gap.

4.13 MNP Behavior Change Strategy among Implemented MNP Interventions

A behavior change strategy is a key component of HF intervention packages in order to support coverage and adherence. The strategy describes the methods for supporting high acceptability and demand for the intervention among participants, as well as how the interventions will help participants develop the skills and knowledge to appropriately use the products. In Table 4.13, 79% of the implemented interventions had a behavior change strategy in place as part of the intervention package and 18% had a strategy under development. Among those with a strategy in place, 44% were in Latin America and the Caribbean. All of the implemented interventions answered questions about the communication channels being used in the intervention package, including those where the strategy was under development or that were not sure if a strategy existed.

Open-ended written responses indicated multiple audiences for the behavior change strategies including parents and caretakers, influential persons and community leaders, community members, and health care providers (data not shown). Mass media, interpersonal communication, and other channels were used to deliver the behavior change strategies with most interventions reporting multiple channels. Among those reporting use of a mass media channel, radio spots (38%) and television spots (24%) were mentioned most frequently. The vast majority of interventions reported carrying out interpersonal communication through both group (91%) and individual (85%) meetings and counseling opportunities. Print media was also widely distributed (94%). Another 47% used the MNP packaging (box/bag) as a channel to convey information, with 44% of these interventions in South Asia.

Multiple personnel from different types of organizations were in charge of delivering the behavior change strategies including paid and volunteer community health workers (74%), government staff (68%), and NGO and contractor staff (58%). Training for those who deliver the MNP intervention was most frequently carried out using group orientations and training (74%) and distribution of written or electronic information (29%).

Most “messages” given to participants on why they should use the MNP were similar. When there was more than one MNP intervention in a country, all interventions in the country typically reported the same “main message” as to the reasons for using the MNP (data not shown). Interventions that reported only one “main message” tended to focus on preventing micronutrient deficiencies, often mentioning anemia specifically. Top reasons given for using MNP focused on preventing anemia (71%), improved development and growth (70%), stronger or being more active (65%), being healthier or experiencing less sickness (59%), improved brain development or intelligence (59%), and increased appetite (53%).

Table 4.13 Interventions currently distributing MNPs: MNP behavior change communication (BCC) strategy, by region, a Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
BCC strategy in place [b]	Yes	27	79.4	1	3.7	9	33.3	3	11.1	12	44.4	2	7.4
	Under development	6	17.6	1	16.7	2	33.3	1	16.7	2	33.3	0	0.0
	Don't know	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
Mass media channels [b]	Radio Spots	13	38.2	1	7.7	3	23.1	3	23.1	5	38.5	1	7.7
	TV Spots	8	23.5	0	0.0	2	25.0	2	25.0	3	37.5	1	12.5
	Billboards	6	17.6	0	0.0	1	16.7	1	16.7	3	50.0	1	16.7
	SMS/Text messages [c]	2	5.9	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0
	Other mass media	4	12.1	0	0.0	1	25.0	1	25.0	2	50.0	0	0.0
Interpersonal communications channels [b]	Group meetings/ counseling	31	91.2	2	6.5	10	32.3	3	9.7	14	41.2	2	5.9
	Individual meetings/ counseling	29	85.3	1	3.4	10	34.5	3	10.3	13	44.8	2	6.9
	Other interpersonal communication strategies	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
Other communication materials/ strategies	Distribution of print media [d]	32	94.1	2	6.2	10	31.2	4	12.5	14	43.8	2	6.2
	MNP packaging (box/bag)	16	47.1	1	6.2	7	43.8	4	25.0	3	18.8	1	6.2
	Other communication materials	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
Personnel charged with delivering BCC strategies [b]	Community health workers, including paid personnel & volunteers	25	73.5	0	0.0	8	32.0	5	20.0	10	40.0	2	8.0
	Government personnel	23	67.6	2	8.7	5	21.7	4	17.4	11	47.8	1	4.3
	NGO or contractor personnel	20	58.0	1	5.0	7	35.0	0	0.0	11	55.0	1	5.0
	UN agency personnel	5	14.7	0	0.0	1	20.0	0	0.0	4	80.0	0	0.0
	Others	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0

Training directed at providers and distributors of MNPs are delivered through [b]	Group orientation/ training	25	73.5	0	0.0	9	36.0	5	20.0	9	36.0	2	8.0
	Written or electronic information about MNP distributed	10	29.4	0	0.0	3	30.0	2	20.0	4	40.0	1	10.0
	Individual orientation/ training	4	11.8	0	0.0	1	25.0	0	0.0	3	75.0	0	0.0
	Other training or BCC strategies	3	8.8	0	0.0	1	33.3	1	33.3	1	33.3	0	0.0
Messages on the reason to give MNPs [e]	Prevent anemia	24	70.6	0	0.0	10	41.7	4	16.7	8	33.3	2	8.3
	Develop better/grow better	23	69.7	1	4.3	11	47.8	3	13.0	6	26.1	2	8.7
	Stronger/more active	22	64.7	1	4.5	10	45.5	4	18.2	7	31.8	0	0.0
	Healthier/less sick	20	58.8	1	5.0	8	40.0	4	20.0	6	30.0	1	5.0
	Improved brain development/ intelligence [f]	20	58.8	2	10.0	8	40.0	2	10.0	6	30.0	2	10.0
	Increased appetite	18	52.9	0	0.0	9	50.0	3	16.7	5	27.8	1	5.6
	Increased weight gain	11	32.4	0	0.0	5	45.5	1	9.1	4	36.4	1	9.1
	Consume iron rich foods	4	11.8	0	0.0	0	0.0	0	0.0	4	100	0	0.0
	Other messages	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Short Message Service (SMS) or text message is the text communication service component of phone, web or mobile communication systems. They allow the exchange of short text messages between fixed line or mobile phone devices.
[d] Examples of print media include cards, brochures, leaflets, stickers, and calendars
[e] Results from closed ended questions only
[f] Includes child more intelligent, improve IQ, better school performance, improved brain and mental development

4.14 MNP Behavior Change Strategy among Planned MNP Interventions
In Table 4.14, 12% of the planned MNP interventions had a behavior change strategy in place and 40% reported that one was under development. Interventions that responded that the strategy was under development or missing still answered questions about the communication channels planned in the intervention package.

Fewer interventions reported plans to use mass media channels compared to interpersonal communication or other communication strategies. The majority of interventions planning to use any mass media channels were located in sub-Saharan Africa. Interpersonal communication channels involving individual and group meetings and counseling were planned by 44% and 32% of the interventions, respectively. Of the interventions planning to use individual meetings and counseling, 36% were located in East Asia and the Pacific. For the group meetings and counseling, 38% were also located in East Asia and the Pacific and another 38% were in South Asia. Planned MNP interventions expected to distribute print media (44%) and some (28%) also expected to use the MNP packaging of the box or bag as a way to convey information.

Interventions planned to use paid and volunteer community health workers (44%), government personnel (32%) and NGO or contractor personnel (16%) to deliver the behavior change strategies. Among those planning to use community health workers, 36% were located in East Asia and the Pacific and for those planning to use government personnel, 63% were located in East Asia and the Pacific. Training for providers and distributors of the MNPs were primarily delivered through group orientations and trainings (72%) and sharing written or electronic information about MNPs (40%).

The messaging will include multiple reasons for participants to use MNPs. These include preventing anemia (44%), improved development and growth (40%), stronger and more active (36%), improved health and less illness (32%), improved brain development and intelligence (28%), increased appetite (16%) and increased weight gain (16%).

Table 4.14 Interventions planning to distribute MNPs: MNP behavior change communication (BCC) strategy, by region, [a] Home Fortification Global Assessment 2011

Item		Total		Sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
BCC strategy in place [b]	Yes	3	12.0	0	0.0	0	0.0	2	66.7	1	33.3	0	0.0
	Under development	10	40.0	2	20.0	4	40.0	2	20.0	1	10.0	1	10.0
	Missing	12	48.0	7	28.0	1	4.0	2	8.0	2	8.0	0	0.0
Mass media channels being used [b]	Billboards	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Radio Spots	2	8.0	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0
	TV Spots	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Other mass media	3	12.0	2	66.7	0	0.0	0	0.0	0	0.0	1	33.3
Interpersonal communication channels [b]	Individual meetings/ counseling	11	44.0	2	18.7	3	27.3	4	36.4	1	9.1	1	9.1
	Group meetings/ counseling	8	32.0	1	12.5	3	37.5	3	37.5	1	12.5	0	0.0
	Other interpersonal communication strategies	1	4.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0
Other communication materials/ strategies [b]	Distribution of print media [c]	11	44.0	3	27.3	3	27.3	3	27.3	1	9.1	1	9.1
	MNP box/bag	7	28.0	1	14.3	3	42.9	3	42.9	0	0.0	0	0.0
	Other communication materials	2	8	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0
Personnel charged with delivering BCC strategies [b]	Community health workers, including paid personnel & volunteers	11	44.0	2	18.2	3	27.3	4	36.4	1	9.1	1	9.1
	Government personnel	8	32.0	2	25.0	0	0.0	5	62.5	1	12.5	0	0.0
	NGO or contractor personnel	4	16.0	2	50.0	0	0.0	2	50.0	0	0.0	0	0.0
	Others	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
Training directed at providers and distributors of MNPs are delivered through [b]	Group orientation/training	18	72.0	5	27.8	4	22.2	6	33.3	2	11.1	1	5.6
	Written or electronic information about MNP distributed	10	40.0	5	50.0	1	10.0	2	20.0	2	20.0	0	0.0
	Individual orientation/training	3	12.0	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0
	Other training or behavior change communication strategies	3	12.0	1	33.3	1	33.3	1	33.3	0	0.0	0	0.0
Messages on the reason to give MNPs [d]	Prevent anemia	11	44.0	2	18.2	5	45.5	2	18.2	1	9.1	1	9.1
	Develop better/grow better	10	40.0	0	0.0	5	50.0	3	30.0	1	10.0	1	10.0
	Stronger/more active	9	36.0	2	22.2	4	44.4	2	22.2	1	11.1	0	0.0

Item		Total		Sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Healthier/less sick	8	32.0	2	25.0	2	25.0	2	25.0	1	12.5	1	12.5
	Improved brain development/ intelligence [e]	7	28.0	0	0.0	4	57.1	1	14.3	1	14.3	1	14.3
	Increased appetite	4	16.0	1	14.3	4	57.1	0	0.0	1	14.3	1	14.3
	Increased weight gain	4	16.0	0	0.0	2	50.0	0	0.0	1	25.0	1	25.0
	Other messages	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of print media include cards, brochures, leaflets, stickers, and calendars
[d] Results from closed ended questions only
[e] Includes child more intelligent, improve IQ, better school performance, improved brain and mental development

4.15 Development of Local Names and Images, and Messaging on MNP Packaging among Implemented MNP Interventions

As part of the development of the behavior change strategy, programs may tailor the name and images on the MNP sachet to be locally relevant, motivating, and appealing to the target populations in order to support high coverage and adherence. In Table 4.15, 85% of the implemented MNP interventions developed a local name for the MNP product, with 48% of these in Latin America and the Caribbean and 28% in South Asia. See Appendix F for the local names reported by interventions. A local image for the MNP package was developed in 53% of the interventions. Interventions that developed a local image were asked if the image developed was displayed on the sachet and packaging (e.g., box or bag), 56% displayed the image only on the sachet, 11% displayed the image only on the packaging, and 33% displayed it on both the sachet and packaging.

Implemented interventions reported the messages displayed on the sachet and on the box or bag packaging, which were later categorized into nine and ten message topics, respectively. On the MNP sachet, the most common message topics were instructions on MNP use (62%) and product descriptions (62%), instructions on storage (32%), manufacturing information (27%), and composition (24%). Two interventions (6%) included warnings and another two interventions (6%) promoted that breast milk is the best food for young children. For the MNP box or bag packaging, the most common messages were product descriptions (44%), manufacturing information (38%), composition (35%), instructions on use (32%), and warnings (24%).

Table 4.15 Interventions currently distributing MNPs: Development of local names and images for MNP, and messages on packages, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Local name developed for MNP	Yes	29	85.3	1	3.4	8	27.6	5	17.2	14	48.3	1	3.4
	No	5	14.7	1	20.0	3	60.0	0	0.0	0	0.0	1	20.0
Local image developed for MNP	Yes	18	52.9	1	5.6	5	27.8	3	16.7	8	44.4	1	5.6
	No	12	35.3	1	8.3	4	33.3	1	8.3	5	41.7	1	8.3
	Under development	1	2.9	0	0.0	0	0.0	0	0.0	1	100	0	0.0
	Missing	3	2.9	0	0.0	2	66.7	1	33.3	0	0.0	0	0.0
If local image developed (n=18), image displayed on[b]	Sachet	10	55.6	0	0.0	1	10.0	1	10.0	7	70.0	1	10.0
	Bag/box	2	11.1	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0
	Both bag/box & sachet	6	33.3	0	0.0	3	50.0	2	33.3	1	16.7	0	0.0
Message topics written on MNP sachet include[b]	Instruction on use	21	61.8	2	9.5	8	38.1	1	4.8	9	42.9	1	4.8
	Product description	21	61.8	1	4.8	5	23.8	2	9.5	12	57.1	1	4.8
	Instructions on storage	11	32.4	1	9.1	3	27.3	1	9.1	5	45.5	1	9.1
	Manufacturing information	9	26.5	1	11.1	4	44.4	0	0.0	4	44.4	0	0.0
	Composition	8	23.5	2	25.0	6	75.0	0	0.0	0	0.0	0	0.0
	Target group	7	20.6	1	14.3	2	28.6	2	28.6	2	28.6	0	0.0
	Health Claims	6	17.6	1	16.7	1	16.7	3	50.0	1	16.7	0	0.0
	Warnings	2	5.9	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0
	Breast milk is best food	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
	No messages	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Don't know	4	11.8	0	0.0	1	25.0	1	25.0	2	50.0	0	0.0
Message topics written on MNP box or bag include[b]	Product description	15	44.1	1	6.7	6	40.0	2	13.3	5	33.3	1	6.7
	Manufacturing information	13	38.2	1	7.7	6	46.2	1	7.7	5	38.5	0	0.0
	Composition	12	35.3	1	8.3	6	50.0	2	16.7	3	25.0	0	0.0
	Instructions on use	11	32.4	1	9.1	5	45.5	3	27.3	2	18.2	0	0.0
	Warnings	8	23.5	0	0.0	0	0.0	0	0.0	0	0.0	8	100
	Target group	7	20.6	1	14.3	3	42.9	2	28.6	1	14.3	0	0.0
	Instructions on storage	6	17.6	0	0.0	2	33.3	0	0.0	0	0.0	4	66.7
	Health claims	4	11.8	1	25.0	1	25.0	2	50.0	0	0.0	0	0.0
	MNP not for sale	4	11.8	1	25.0	2	50.0	1	25.0	0	0.0	0	0.0

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
	Where to get MNP	1	2.9	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	No messages	2	5.9	0	0.0	0	0.0	0	0.0	0	0.0	2	100
	Don't know	8	23.5	1	12.5	2	25.0	1	12.5	3	37.5	1	12.5

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%

4.16 Development of Local Names and Images, and Messaging on MNP Packaging among Planned MNP Interventions

A local name was developed by 28% of the planned interventions, was under development in 24%, and was not developed in 28% (Table 4.16). See Appendix F for the local names reported by interventions. Among the planned interventions that developed a local name 57% were in South Asia, 50% of those under development were in East Asia and the Pacific, and 43% of those that did not develop a local name were in sub-Saharan Africa. A local image was under development in 28% and was not developed in 40% of the planned interventions. For interventions that had developed a local image (12%), all planned to display them on the box or bag packaging as well as the sachet.

Interventions reported a variety of messages on the sachet and packaging and these were categorized into seven message topics. The most frequent messages on the sachets were instructions on MNP use (32%), storage (24%), product descriptions (20%) and manufacturing information (20%). For packaging, the most common message topics included product descriptions (36%), manufacturing information (28%), instructions on use (24%) and composition (20%).

Table 4.16 Interventions planning to distribute MNPs: Development of local names and images for MNP, and messages on packages, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Local name developed for MNP	Yes	7	28.0	0	0.0	4	57.1	2	28.6	1	14.3	0	0.0
	No	7	28.0	3	42.9	1	14.3	1	14.3	2	28.6	0	0.0
	Under development	6	24.0	1	16.7	0	0.0	3	50.0	1	16.7	1	16.7
	Missing	5	20.0	4	80.0	0	0.0	1	20.0	0	0.0	0	0.0
Local image developed for MNP	Yes	3	12.0	0	0.0	3	100	0	0.0	0	0.0	0	0.0
	No	10	40.0	3	30.0	2	20.0	3	30.0	2	20.0	0	0.0
	Under development	7	28.0	1	14.3	0	0.0	3	42.9	2	28.6	1	14.3
	Missing	5	20.0	4	80.0	0	0.0	1	20.0	0	0.0	0	0.0

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
If local image developed (n=3), image displayed on[b]	Both bag/box & sachet	3	100	0	0.0	3	100	0	0.0	0	0.0	0	0.0
Messages written on MNP sachet include[b]	Instructions on use	8	32.0	0	0.0	4	50.0	3	37.5	1	12.5	0	0.0
	Instructions on storage	6	24.0	0	0.0	3	50.0	2	33.3	1	16.7	0	0.0
	Product description	5	20.0	0	0.0	1	20.0	3	60.0	1	20.0	0	0.0
	Manufacturing information	5	20.0	0	0.	1	20.0	3	60.0	1	20.0	0	0.0
	Composition	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
	Target group	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Warnings	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Under development	6	24.0	3	50.0	0	0.0	1	16.7	1	16.7	1	16.7
	Don’t know	9	36.0	5	55.6	0	0.0	2	22.2	2	22.2	0	0.0
Messages written on MNP box or bag include[b]	Product description	9	36.0	0	0.0	4	44.4	4	44.4	1	11.1	0	0.0
	Manufacturing information	7	28.0	0	0.0	4	57.1	2	28.6	1	14.3	0	0.0
	Instructions on use	6	24.0	0	0.0	4	66.7	2	33.3	0	0.0	0	0.0
	Composition	5	20.0	0	0.0	3	60.0	2	40.0	0	0.0	0	0.0
	Warnings	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
	Target group	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Instructions on storage	1	4.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Under development	5	20.0	3	60.0	0	0.0	1	20.0	0	0.0	1	20.0
	Don’t know	10	40.0	5	50.0	0	0.0	2	20.0	3	30.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region

[b] Multiple choice answers, totals may equal more than 100%

4.17 Monitoring and Evaluation among Implemented MNP Interventions

Monitoring and evaluation systems provide information for continuous program improvement and help demonstrate whether interventions have carried out expected activities, achieved their expected outcomes and made an impact. Table 4.17 shows that 88% of implemented MNP interventions had a monitoring and evaluation plan in place, with 47% of these interventions in Latin America and the Caribbean and 33% in South Asia. Implemented interventions most frequently collected monitoring information on coverage (88%), followed by supplies (77%), appropriate use of MNPs (74%), behavior change strategies (62%), training (59%), and procurement (53%).

Table 4.17 also shows that 74% of implemented MNP interventions had conducted (or planned to conduct) an impact evaluation, with 44% in Latin America and the Caribbean and 28% in South Asia. Interventions conducting impact evaluations (n=25) generally reported multiple impact indicators including anemia (88%), feeding practices (80%), iron status 28%, and other indicators (28%). Examples of "other" impact indicators included nutritional status, morbidity, MNP coverage, MNP acceptability, food security, and school performance.

Strategies to address reports of adverse effects associated with the use of MNPs are important to support adherence and appropriate use, maintain positive attitudes toward the MNP intervention, and address any problems with the product. Among implemented interventions, 56% reported they had a strategy in place to manage reports of adverse effects with 47% of these interventions in Latin America and the Caribbean and 32% in South Asia. Descriptions of these strategies included systems to record reports of adverse effects, home visits, and disseminating information through the behavior change communication channels.

Table 4.17 Interventions currently distributing MNP: Monitoring and evaluation plans, focus and indicators, by region, [a] Home Fortification Global Assessment 2011

Item			Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
			n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented			34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Monitoring and evaluation plan in place		Yes	30	88.2	1	3.3	10	33.3	3	10.0	14	46.7	2	6.7
		No	1	2.9	0	0.0	1	100	0	0.0	0	0.0	0	0.0
		Under development	3	8.8	1	33.3	0	0.0	2	66.7	0	0.0	0	0.0
Monitoring information collected on:	MNP procurement	Yes	18	52.9	1	5.6	5	27.8	3	16.7	8	44.4	1	5.6
		No	13	38.2	0	0.0	6	46.2	2	15.4	5	38.5	0	0.0
		Under development	1	2.9	0	0.0	0	0.0	0	0.0	0	0.0	1	100
		Missing	2	5.7	1	100	0	0.0	0	0.0	1	100	0	0.0
	MNP supplies	Yes	26	76.5	1	3.8	7	26.9	4	15.4	13	50.0	1	3.8
		No	6	17.6	0	0.0	4	66.7	0	0.0	1	16.7	1	16.7
		Under development	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
		Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Training with providers & distributors	Yes	20	58.8	0	0.0	9	45.0	3	15.0	6	30.0	2	10.0
		No	10	29.4	0	0.0	2	20.0	1	10.0	7	70.0	0	0.0
		Under development	3	8.8	1	33.3	0	0.0	1	33.3	1	33.3	0	0.0
		Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Behavior change strategies	Yes	21	61.8	1	4.8	7	33.3	3	14.3	8	38.1	2	9.5
		No	11	32.4	0	0.0	4	36.4	1	9.1	6	54.5	0	0.0
		Under development	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0

Item			Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
			n	%	n	%	n	%	n	%	n	%	n	%
		Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	MNP coverage	Yes	30	88.2	1	3.3	9	30.0	4	13.3	14	46.7	2	6.7
		No	2	5.9	0	0.0	2	100	0	0.0	0	0.0	0	0.0
		Under development	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
		Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Appropriate use of MNP	Yes	25	73.5	1	4.0	9	36.0	3	12.0	11	44.0	1	4.0
		No	7	20.6	0	0.0	2	28.6	1	14.3	3	42.9	1	14.3
		Under development	1	2.9	0	0.0	0	0.0	1	100	0	0.0	0	0.0
		Missing	1	2.9	1	100	0	0.0	0	0.0	0	0.0	0	0.0
Impact evaluations conducted (or planned)		Yes	25	73.5	2	8.0	7	28.0	3	12.0	11	44.0	2	8.0
		No	9	26.5	0	0.0	4	44.4	2	22.2	3	33.3	0	0.0
Impact indicators for impact evaluations (n=25)[b]		Anemia	22	88.0	2	9.1	4	18.2	3	13.6	11	50.0	2	9.1
		Feeding practices	20	80.0	2	10.0	4	20.0	3	15.0	9	45.0	2	10.0
		Iron status	7	28.0	1	14.3	0	0.0	2	28.6	2	28.6	2	28.6
		Other	7	28.0	1	14.3	3	42.8	0	0.0	2	28.6	1	14.3
Strategy for dealing with reports of adverse effects associated with MNPS		Yes	19	55.9	0	0.0	6	31.6	3	15.8	9	47.4	1	5.3
		No	10	29.4	0	0.0	3	30.0	1	10.0	5	50.0	1	10.0
		Under development	2	5.9	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0
		Missing	3	8.8	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%

4.18 Monitoring and Evaluation among Planned MNP Interventions

Among the planned MNP interventions, 40% had a monitoring and evaluation plan in place (Table 4.18) with 40% of those interventions in South Asia. Another 40% reported the plan was under development and 40% of those interventions were in sub-Saharan Africa.

Table 4.18 Interventions planning to distribute MNPs: Monitoring and evaluation plans, focus and indicators, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Monitoring and evaluation plan in place	Yes	10	40.0	1	10.0	4	40.0	2	20.0	2	20.0	1	10.0
	No	4	16.0	2	50.0	0	0.0	2	50.0	0	0.0	0	0.0
	Under development	10	40.0	4	40.0	1	10.0	3	30.0	2	20.0	0	0.0
	Missing	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.

4.19 Coordination and Information Sharing among Implemented MNP Interventions

Coordination among partner organizations helps support the commitment, sustainability, harmonization, and scale-up of HF interventions in a country. In Table 4.19, 85% of the implemented interventions reported there is a coordinating body that oversees the development and implementation of the MNP intervention. These interventions were in Latin America and the Caribbean (60%) and South Asia (40%).

Information sharing with those not directly involved with interventions is important to inform those who might be influenced by or have an interest in the intervention in order to gain support for the intervention and prevent misunderstandings or rumors, which can undermine the intervention. Most interventions (82%) carried out information sharing with those who are not directly involved with the intervention. Among those that did information sharing, 71% of the interventions shared information with health authorities, 39% with the general public, 36% with the media, 25% with consumer groups and 36% reported some other group. Example descriptions of “other” organizations included other ministries, partners or organizations, and disseminating at international and academic meetings.

Table 4.19 Interventions currently distributing MNPs: Coordination and information sharing, by region,[a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Intervention coordinating body [b]	Yes	29	85.3	2	6.9	9	31.0	5	17.2	11	37.9	2	6.9
	No	5	14.7	0	0.0	2	40.0	0	0.0	3	60.0	0	0.0
Information sharing [c]	Yes	28	82.4	2	7.1	7	25.0	5	17.9	12	42.9	2	7.1
	No	6	17.6	0	0.0	4	66.7	0	0.0	2	33.3	0	0.0
Among interventions that share information (n=28), who they share it, with [d]	Health Authorities	20	71.4	2	10.0	7	35.0	4	20.0	5	25.0	2	10.0
	General public	11	39.3	0	0.0	2	18.2	2	18.2	6	54.5	1	9.1
	Media	10	35.7	0	0.0	2	20.0	3	30.0	4	40.0	1	10.0
	Consumer groups	7	25.0	0	0.0	2	28.6	2	28.6	1	14.3	2	28.6
	Others	10	35.7	0	0.0	1	10.0	2	20.0	7	70.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Availability of coordinating body that oversees the development and implementation of the MNP intervention.
[c] Carry out information sharing with those who are not directly involved with the intervention.
[d] Multiple choice answers, totals may equal more than 100%

4.20 Coordination and Information Sharing among Planned MNP Interventions

Table 4.20 shows that 32% of the interventions reported a coordinating body exists for the development and implementation of the planned MNP intervention. Another 52% of the planned interventions reported they carry out information sharing with those not directly involved with the intervention. Among those that carry out information sharing, 85% do so with health authorities. The response option “intervention not yet started” should not have been included for these questions, which limits the ability to understand coordination and information sharing activities among planned MNP interventions.

Table 4.20 Interventions planning to distribute MNPs: Coordination and information sharing, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Coordinating body [b]	Yes	8	32.0	2	25.0	2	25.0	2	25.0	1	12.5	1	12.5
	No	4	16.0	1	25.0	2	50.0	1	25.0	0	0.0	0	0.0
	Not yet started	12	48.0	4	33.3	1	8.3	4	33.3	3	25.0	0	0.0
	Missing	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
Information sharing [c]	Yes	13	52.0	4	30.8	3	23.1	4	30.8	1	7.7	1	7.7
	No	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Under development	1	4.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Not yet started	10	40.0	3	30.0	1	10.0	3	30.0	3	30.0	0	0.0
	Missing	2	8.0	2	100	0	0.0	0	0.0	0	0.0	0	0.0
Among interventions that share information (n=13), who they share it with [d]	Health Authorities	11	84.6	2	18.2	3	27.3	4	36.4	1	9.1	1	9.1
	General public	3	23.1	1	33.3	0	0.0	2	66.7	0	0.0	0	0.0
	Media	2	15.4	0	0.0	0	0.0	2	100	0	0.0	0	0.0
	Consumer groups	1	7.7	0	0.0	0	0.0	1	100	0	0.0	0	0.0
	Other	2	15.4	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Availability of coordinating body that oversees the development and implementation of the MNP intervention.
[c] Carry out information sharing with those who are not directly involved with the intervention.
[d] Multiple choice answers, totals may equal more than 100%

4.21 Main Challenges among Implemented MNP Interventions

There are potential challenges in all phase of developing and implementing MNP interventions and understanding these challenges specifically for MNP interventions highlights areas to focus the work of the home fortification community. Interventions were asked to report the top three challenges to implementation faced by the intervention. Among implemented MNP interventions, monitoring and evaluation was reported by 62% of interventions, with 38% of these interventions in South Asia and 38% in Latin America and the Caribbean. Adherence was also a challenge for 32% of interventions, with 46% of these from South Asia. MNP procurement was a problem for 29%; 60% of these interventions were in Latin America and the Caribbean. Another 29% of interventions reported funding for the MNP product and 18% stated coordination as major challenges.

Table 4.21 Interventions currently using MNP: Main challenges to implementation, by region [a] , Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions implemented		34	100	2	5.9	11	32.4	5	14.7	14	41.2	2	5.9
Main challenges to implementation [b, c]	Monitoring and evaluation	21	61.8	1	4.8	8	38.1	3	14.3	8	38.1	1	4.8
	Adherence	11	32.4	1	9.1	5	45.5	2	18.2	3	27.3	0	0.0
	Procurement	10	29.4	1	10.0	1	10.0	1	10.0	6	60.0	1	10.0
	Funding for product	10	29.4	0	0.0	5	50.0	2	20.0	1	10.0	2	20.0
	Coordination	6	17.6	0	0.0	0	0.0	1	16.7	5	83.3	0	0.0
	Acceptability by government	4	11.8	0	0.0	2	50.0	0	0.0	1	25.0	1	25.0
	Technical assistance or programme support	4	11.8	0	0.0	1	25.0	1	25.0	1	25.0	1	25.0
	Acceptability by academia	3	8.8	0	0.0	2	66.7	0	0.0	1	33.3	0	0.0
	Acceptability by intervention participants	2	5.9	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0
	Training	2	5.9	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0
	Programme design	2	5.9	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0
	Funding for delivery	2	5.9	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0
	Acceptability by health community	2	5.9	0	0.0	0	0.0	0	0.0	2	100	0	0.0
	Registration of product as drug does not allow mass media advertisement	1	2.9	0	0.0	1	100	0	0.0	0	0.0	0	0.0
	Other [d]	8	23.5	0	0.0	3	37.5	1	12.5	4	50.0	0	0.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Interventions were asked to mark the top three challenges confronted by the intervention
[d] Examples of "other" challenges included multiple languages spoken in the intervention area; areas that are difficult to reach because they were remote or because of the rainy season; areas are insecure; lack of local production capacity; lack of government leadership and bureaucratic challenges among government agencies.

4.22 Main Challenges among Planned MNP Interventions

Table 4.22 describes the main challenges to implementation for planned MNP interventions. Lack of monitoring and evaluation technical assistance was the most common response (44%) and was mentioned by interventions across all regions. Other major challenges included lack of funding for the MNP product (28%), procurement (24%), acceptability by the government (20.0%), and adherence (20%).

Table 4.22 Interventions planning to distribute MNP: Main challenges to implementation, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and East Europe	
		n	%	n	%	n	%	n	%	n	%	n	%
MNP interventions planned		25	100	8	32.0	5	20.0	7	28.0	4	16.0	1	4.0
Main challenges to implementation [b, c]	Monitoring and evaluation	11	44.0	3	27.3	3	27.3	3	27.3	1	9.1	1	9.1
	Funding for product	7	28.0	2	28.6	2	28.6	2	28.6	0	0.0	1	14.3
	Procurement	6	24.0	1	16.7	2	33.3	2	33.3	1	16.7	0	0.0
	Acceptability by government	5	20.0	2	40.0	3	60.0	0	0.0	0	0.0	0	0.0
	Adherence	5	20.0	1	20.0	3	60.0	1	20.0	0	0.0	0	0.0
	Technical assistance or programme support	4	16.0	3	75.0	0	0.0	1	25.0	0	0.0	0	0.0
	Programme design	3	12.0	0	0.0	0	0.0	2	66.7	1	33.3	0	0.0
	Acceptability by academia	3	12.0	0	0.0	3	100	0	0.0	0	0.0	0	0.0
	Coordination	3	12.0	0	0.0	0	0.0	2	66.7	1	33.3	0	0.0
	Funding for delivery	3	12.0	2	66.7	0	0.0	1	33.3	0	0.0	0	0.0
	Acceptability by intervention participants	2	8.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0
	Training	1	4.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0
	Other [d]	4	16.0	0	0.0	2	50.0	1	25.0	0	0.0	1	25.0

[a] No respondents reported MNP interventions currently planned or implemented in the Middle East and North Africa region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Interventions were asked to mark the top three challenges confronted by the intervention
[d] Descriptions of "other" challenges focused on lack of general funding, problems with identifying delivery mechanisms and lack of policies to support distribution, lack of local production or manufacturers, insecurity, and weak government infrastructure.

CHAPTER 5: IMPLEMENTED AND PLANNED INTERVENTIONS USING LIPID-BASED NUTRIENT SUPPLEMENTS (LNS)

There were a total of 20 lipid-based nutrient supplements (LNS) interventions identified in this assessment. Of these, 17 were currently distributing LNS in 13 countries and three were planning to start distribution within the next 12 months in three countries (Table 5.0). The majority of the implemented LNS interventions (see Figure 5.1) were in sub-Saharan Africa (71%), with additional interventions in East Asia and the Pacific (12%), Latin America and the Caribbean (12%) and the Middle East and North Africa (5%) regions. Three LNS interventions were planned to start in Cameroon, the Democratic Republic of Congo (DRC), and Indonesia (see Figure 5.2). Four countries had multiple LNS interventions being implemented or planned including Guatemala (n=2), Mauritania (n=2), Niger (n=2), and South Sudan (n=2). Among the countries that do not currently have LNS interventions being implemented or planned, 18 reported that they have interest in starting LNS interventions in the future; 72% were from sub-Saharan Africa.

Table 5.0 Total number of LNS interventions implemented or planned and by region, Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East & North Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
LNS interventions	Total implemented or planned	20	100	14	70.0	1	5.0	0	0.0	3	15.0	2	10.0	0	0.0
	Implemented	17	85.0	12	70.6	1	5.8	0	0.0	2	11.8	2	11.8	0	0.0
	Planned	3	15.0	2	66.7	0	0.0	0	0.0	1	33.3	0	0.0	0	0.0

Figure 5.1 Countries with implemented LNS interventions by region, n=17 interventions in 13 countries, Home Fortification Global Assessment 2011

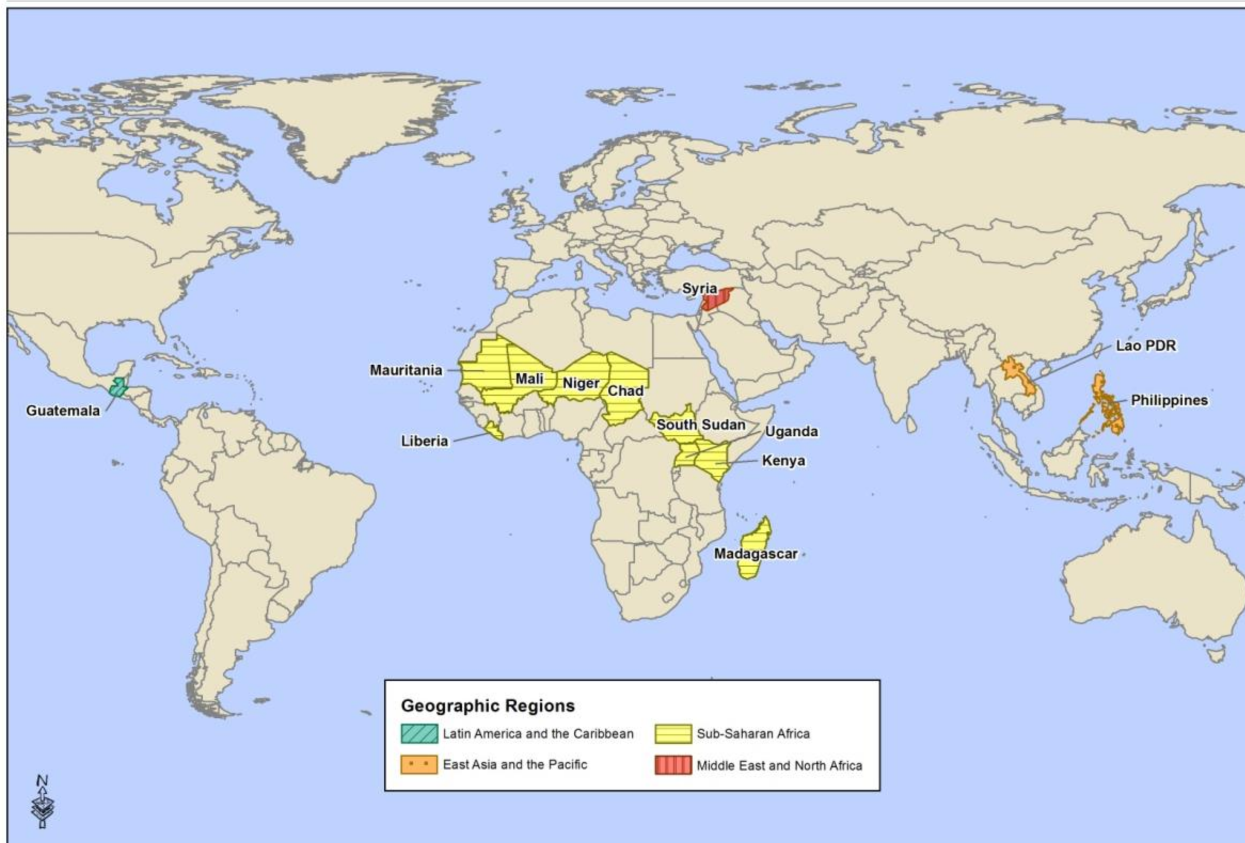


Figure 5.2 Countries with LNS interventions planned to begin by 2012 by region, n=3 interventions in 3 countries, Home Fortification Global Assessment 2011

5.1 Objectives, Expected Outcomes and Multi-Sectorial Approaches among Implemented and Planned LNS Interventions

More than half of the implemented LNS interventions included objectives to improve complementary feeding (53%) and to prevent and treat moderate acute malnutrition (MAM) (53%), while 41% had an objective to prevent and control micronutrient malnutrition and 35% to reduce stunting (Table 5.1). The expected outcomes of the interventions centred primarily on reducing malnutrition including the prevention and treatment of MAM (24%), reducing both MAM and stunting (18%), reducing or preventing only stunting (18%) or underweight (12%). LNS was included as a strategy in at least one of nine integrated multi-sectorial approaches for 94% of the interventions; most frequently LNS was part of humanitarian response programmes (63%), prevention of MAM programmes (63%), and prevention and control of micronutrient deficiency programmes (44%).

Intervention objectives reported by the three planned LNS interventions included improved complementary feeding, prevention and control of micronutrient deficiencies, prevention and control of anaemia, reduction of stunting, and prevention and treatment of MAM (data not shown). Among the two planned interventions reporting, expected outcomes included prevention and reduction of MAM and stunting. All three planned interventions were integrated into infant and young child feeding programmes and integration with five other multi-sectorial approaches were also reported at least once.

Table 5.1 Interventions currently distributing LNS: intervention objective, expected primary outcome of the intervention, degree and type of integration, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle east and north Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Objective(s) of the LNS intervention [b]	Improved complementary feeding	9	52.9	5	55.6	1	11.1	1	11.1	2	22.2
	Prevention & treatment of MAM [c]	9	52.9	7	77.8	0	0	1	11.1	1	11.1
	Micronutrient deficiency prevention and control	7	41.2	5	71.4	1	14.3	1	14.3	0	0.0
	Reduction of stunting	6	35.3	3	50.0	0	0.0	1	16.7	2	33.3
	Anemia prevention and control	5	29.4	5	100	0	0.0	0	0.0	0	0.0
	Other	2	11.8	2	100	0	0.0	0	0.0	0	0.0
Expected outcome [b]	Prevent and treat MAM	4	23.5	3	75.0	0	0	1	25.0	0	0.0
	Reduce general prevalence of malnutrition (MAM and Stunting)	3	17.6	2	66.7	0	0.0	0	0.0	1	33.3
	Reduce and prevent stunting	3	17.6	0	0.0	1	33.3	1	33.3	1	33.3
	Reduce underweight	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	Other [d]	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	Missing	2	11.8	2	100	0	0.0	0	0.0	0	0.0
LNS is part of integrated program	Stand-alone intervention, not integrated	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Integrated multi-sectorial approach	16	94.1	11	68.8	1	6.2	2	12.5	2	12.5
Integrated multi-sectorial approach as part of (n=16) [b]	Humanitarian response programme	10	62.5	6	60.0	1	10	1	10.0	2	20.0
	Prevention of MAM	10	62.5	8	80.0	0	0.0	1	10.0	1	10.0
	Micronutrient deficiency prevention and control	7	43.8	3	42.9	1	14.3	1	14.3	2	28.6
	Reduction of stunting strategy	6	37.5	3	50.0	0	0.0	1	16.7	2	33.3
	Infant and young child feeding	6	37.5	3	50.0	0	0.0	1	16.7	2	11.8
	Anemia prevention and control	4	25.0	2	50.0	0	0.0	0	0.0	2	50.0
	Other [e]	3	18.8	3	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Moderate acute malnutrition, MAM
[d] Other responses included improve complementary feeding, provide supplementation, and blanket feeding
[e] Other responses included child survival, joint child survival and nutrition programmes, and food safety, vaccination and bed net distribution programmes.

5.2 Organizations Supporting the Intervention, Funding Sources, Intervention Duration, and Intervention Scale among Implemented and Planned LNS Interventions

A total of 31 organizations[4](data not shown) were involved in the 17 implemented LNS interventions with an average of 3 organizations per intervention (range 1 to 7). In Table 5.2, the most frequently mentioned organization types supporting the implementation of the intervention included multilateral organizations (71%), national governments (59%), and international NGOs (47%). International governments or organizations provided funding for 47% of the implemented LNS interventions, followed by multilateral organizations (35%) and private organizations (29%). The two LNS interventions in Latin America and the Caribbean reported they received support only from local NGOs or associations and they received funds only from private sources.

Most implemented interventions (88%) distributed the LNS product at no cost to participants (data not shown). The two interventions that charged participants for the LNS were located in Madagascar and Uganda. In Madagascar, some of the participants received the LNS for free and others were asked to pay $0.94 per pot. The intervention in Uganda did not report the cost to participants.

Among the implemented LNS interventions reported in this assessment, the earliest started distributing LNS in sub-Saharan Africa in 2006, while 77% began distributing in 2010 and 2011, which was also when interventions in regions beyond sub-Saharan Africa started distributing. The scale of interventions in sub-Saharan Africa ranged from pilot to national level distribution. Among all 17 interventions, 35% were at pilot scale, including both interventions in Latin America and the Caribbean and the intervention in the Middle East and North Africa region; 42% were at sub-national scale, including both interventions from the East Asia and Pacific region. Two interventions (12%) in sub-Saharan Africa were fully scaled up at national level. The planned final scale for the implemented LNS interventions were sub-national (47%), including all the interventions in regions other than sub-Saharan Africa, while three interventions (18%) in sub-Saharan Africa were planning a final national scale of distribution.

A total of 16 organizations[5] (data not shown) were involved in the three planned LNS interventions, with an average of 6 organizations per intervention (range 3-8). Multiple types of organization supported the planned interventions, with all three supported by national governments and multilateral organizations. Funding sources were intervention specific, with four sources funding a single intervention each. All three interventions planned to distribute the LNS products for free. The

[4] Organization types listed generically, e.g., “NGOs,” were only counted once for each intervention.

[5] Organization types listed generically, e.g., “NGOs,” were only counted once for each intervention.

planned intervention in the East Asia & Pacific region was expected to start distribution in 2011, while the two interventions in sub-Saharan Africa planned to start distribution in 2012. The expected final scale of distribution for the three interventions was not yet defined.

Table 5.2 Interventions currently distributing LNS: Funding source, length of distribution, scale of intervention today and in the future, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia & Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Organizations involved in supporting the implementation of the intervention [b]	Multilateral Organization	12	70.6	9	75.0	1	8.3	2	16.7	0	0.0
	National government	10	58.8	9	90.0	0	0.0	1	10.0	0	0.0
	International NGO	8	47.1	7	87.5	0	0.0	1	12.5	0	0.0
	Local NGO/Association	4	23.5	2	50.0	0	0.0	0	0.0	2	50.0
	International Government/ Organization	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Funding source [b]	International Government/ Organization	8	47.1	6	75.0	1	12.5	1	12.5	0	0.0
	Multilateral organizations	6	35.3	5	83.3	0	0.0	1	16.7	0	0.0
	Private [c]	5	29.4	3	60.0	0	0.0	0	0.0	2	40.0
	National Government	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	International NGO	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Unidentified [d]	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Year distribution started	2006	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	2008	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	2009	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	2010	5	29.4	3	60.0	1	20.0	1	20.0	0	0.0
	2011	8	47.1	5	62.5	0	0	1	12.5	2	25.0
Current scale of LNS distribution	Pilot	6	35.3	3	50.0	1	16.7	0	0.0	2	33.3
	Sub-National [e]	9	52.9	7	77.8	0	0.0	2	22.2	0	0.0
	National	2	11.8	2	100	0	0.0	0	0.0	0	0.0
Planned final scale of LNS distribution	Pilot	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Sub-national distribution [e]	10	58.8	5	50.0	1	10.0	2	20.0	2	20.0
	National distribution	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	Don't know	3	17.6	3	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Private defined as private companies, such as DSM.
[d] Reported as “partners” or “other partners”
[e] The responses for sub-national include those who self-reported sub-national as well as those who reported “other” for district level distribution and as part of a humanitarian response.

5.3 Target Groups and Numbers of Participants Reached among Implemented and Planned LNS Interventions

As presented in Table 5.3, 71% of the implemented LNS interventions targeted children 6-23 months of age and 18% targeted children 6-36 months of age. The two interventions targeting children 6-59 months (12%) were taking place in Latin America and the Caribbean region.

In 2010, implemented interventions reportedly reached a total of 1.17 million participants worldwide. Among these, 47% of the interventions reached 25,000 participants or less, while 24% reached 100,000 or more participants. In 2011, a total of 1.14 million participants were expected to be reached worldwide with 35% of these interventions expected to reach up to 25,000 participants, 18% expected to reach between 25,000 and 100,000 participants, and 24% expected to reach 100,000 or more participants.

Among the three LNS interventions being planned (data not shown), one intervention in sub-Saharan Africa and one in East Asia and the Pacific were expecting to target children 6-23 months of age. The intervention in East Asia and the Pacific reported it was expecting to reach between 1,000 and 10,000 participants in 2011.

Table 5.3 Interventions currently distributing LNS: Target groups and the number of participants reached in 2010 and expected in 2011, by region [a], Home fortification Global Assessment 2011

Item		Total		sub- Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Target Group [b,c]	6-23 months	12	70.6	9	75.0	1	8.3	2	16.7	0	0.0
	6-36 months	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	6-59 months	2	11.8	0	0.0	0	0.0	0	0.0	2	100
Number of participants reached by intervention in 2010 [b, d]	<1000	2	11.8	0	0.0	0	0.0	0	0.0	2	100
	1,000 < 10,000	4	23.5	3	75.0	1	25.0	0	0.0	0	0.0
	10,000 < 25,000	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	25,000 < 100,000	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Item		Total		sub- Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
	100,000 < 500,000	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	≥500,000	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Missing	5	29.4	3	60.0	1	20.0	1	20.0	0	0.0
Number of participants expected to be reached in 2011 [c, e]	<1000	1	5.9	0	0.0	0	0.0	0	0.0	1	100
	1,000 < 10,000	4	23.5	1	25.0	1	25.0	1	25.0	1	25.0
	10,000 < 25,000	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	25,000 < 100,000	4	17.6	4	100	0	0.0	0	0.0	0	0.0
	100,000 < 500,000	3	17.6	2	66.7	0	0	1	33.3	0	0.0
	≥500,000	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Missing	3	17.6	3	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] In 2010, implemented LNS interventions expected to reach: 1,155,490 children 6-23 months; 9,000 children 6-36 months; 1,000 children 6-59 months.
[c] In 2011, implemented LNS interventions expected to reach: 1,094,000 children 6-23 months; 45,000 children 6-36 months; 5,700 children 6-59 months.
[d] In 2010, implemented LNS interventions expected to reach the following number of participants in each region: 1,162,000 sub-Saharan Africa; 2,490 Middle East & North Africa; 1,000 Latin America & the Caribbean; not reported East Asia and Pacific.
[e] In 2011, implemented LNS interventions expected to reach the following number of participants in each region: 1,013,000 sub-Saharan Africa; 121,000 East Asia and Pacific; 5,700 Latin America & the Caribbean; 5,000 Middle East & North Africa.

5.4 LNS Formulation, Iron Compounds, LNS Registrations and Approvals among Implemented and Planned LNS Interventions

Among the implemented LNS interventions, 82% distributed the medium quantity formulation and 18% distributed the small quantity formulation (Table 5.4). Medium quantity LNS is designed for the prevention of moderate acute malnutrition and small quantity LNS is designed to support healthy growth and development and prevent stunting (www.ilins.org). The detailed formulations and quantities of each as reported by the LNS interventions are presented in Appendix D. The iron type was non-encapsulated iron sulphate ($FeSO_4$) for all interventions. For 29% of the interventions (all in sub-Saharan Africa), the LNS product was registered in the country and for 47% of the interventions it was not registered. Among the interventions that registered the LNS, 60% categorized it as a nutritional supplement. An intervention in Niger had special permission to distribute the LNS product due to the nutritional crisis, but the product was not registered. Over three quarters of the interventions secured government approval for use of the LNS product in the country.

The planned LNS intervention in DR Congo planned to use the small quantity LNS formulation and the planned intervention in Indonesia planned to use medium quantity LNS formulation (data not shown). The iron compound for both products is non-encapsulated iron sulphate (FeSO4). There was no information reported as to whether the LNS product was registered in the country or whether the government gave approval for use of LNS in the country.

Table 5.4 Interventions currently distributing LNS: LNS Formulation, iron compounds, LNS country registration and government approvals, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
LNS formula [b]	Medium quantity	14	82.4	11	78.6	0	0.0	2	14.3	1	7.1
	Small quantity	3	17.6	1	33.3	1	33.3	0	0.0	1	33.3
LNS registered in the country	Yes	5	29.4	5	100	0	0.0	0	0.0	0	0.0
	No	8	47.1	4	50.0	0	0	2	25.0	2	25.0
	Under government review	1	5.9	0	0.0	1	100	0	0.0	0	0.0
	Don't know	3	17.6	3	100	0	0.0	0	0.0	0	0.0
Registration category (n=5)	Nutritional Supplement	3	60.0	3	100	0	0.0	0	0.0	0	0.0
	Not yet decided	2	40.0	1	50.0	1	50.0	0	0.0	0	0.0
Government approval for LNS use in country [c, d]	Yes	13	76.5	9	69.2	0	0	2	15.4	2	15.4
	No	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Under government review	2	100	1	50.0	1	50.0	0	0.0	0	0.0
	Don't know	1	5.9	1	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.

[b] Formula were categorized as medium quantity LNS or small quantity LNS based on the international brand name reported (Plump'doz ™ = medium quantity and Nutributter ™ = small quantity). For interventions that did not report the international brand name, the categorization was based on the kilocalories reported for each product and whether it was reported to be packaged as a pot or sachet. For interventions not reporting the international brand name or kilocalories, then those that reported it was packaged as a pot were assumed to be medium quantity LNS and those in a sachet as small quantity LNS.

[c] Special authorization to respond to the nutritional crisis in Niger.

[d] Government approval for use of LNS in country may include an ethical clearance, proof of safety, or standard established.

5.5 LNS Procurement, Manufacturers, Patents, and Quality among Implemented and Planned LNS Interventions

The World Food Programme (47%) and UNICEF (24%) procured over 70% of the LNS for the 17 implemented interventions (Table 5.5). For two interventions, multiple agencies were reported to procure the LNS product. Nutriset manufactured the LNS for 77% of the interventions and only one intervention in sub-Saharan Africa reported the LNS product was partly or entirely manufactured in country. In most implemented interventions (82%), it was reported that the LNS product was legally protected by a patent or other legal arrangement. Among the interventions, 59% had a protocol in place to check the quality of the LNS product and two interventions in sub-Saharan Africa (12%) reported ever experiencing a quality problem with the LNS product. In both cases, the problem was related to packaging.

For the three planned LNS interventions, both the World Food Programme and UNICEF were procuring the LNS product (data not shown). Garudafood and Nutriset were each reported as the LNS manufacturer for an intervention, and the LNS product was going to be partly or entirely manufactured in country for the intervention in East Asia and the Pacific. In one case the LNS product was reported as being protected by a patent or other legal arrangement and in another case the legal protection was in process. None of the planned interventions reported they had a protocol to check the quality of the LNS product.

Table 5.5 Interventions currently distributing LNS: LNS procurement, manufacturing and quality assurance, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
LNS procurement	WFP	8	47.1	5	62.5	1	12.5	2	25.0	0	0.0
	UNICEF	4	23.5	4	100	0	0.0	0	0.0	0	0.0
	MSF	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Don't know	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Other	3	17.6	1	33.3	0	0.0	0	0.0	2	66.7
LNS product partly or entirely manufactured locally in country	Yes	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	No	16	94.1	11	68.8	1	6.3	2	12.5	2	12.5
Product manufacturer	Nutriset	13	76.5	10	76.9	1	7.7	2	15.4	0	0.0
	Edesia LLC	2	11.8	0	0.0	0	0.0	0	0.0	2	100
	Groupe BASAN-JB	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
LNS protected by a patent or other legal arrangement	Yes	14	82.4	10	71.4	1	7.1	1	7.1	2	14.3
	Missing	3	17.6	2	66.7	0	0.0	1	33.3	0	0.0

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
Intervention has protocol to check quality of LNS	Yes	10	58.8	6	60.0	1	10.0	1	10.0	2	20.0
	No	6	35.3	5	83.3	0	0.0	1	16.7	0	0.0
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Intervention ever experienced any problems with the quality of LNS	Yes	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	No	14	82.4	9	64.3	1	7.1	2	14.3	2	14.3
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Other responses included UN agency (not further specified); UNICEF, MSF, & MDM; UNHCR & Wuqu'Kawoq.

5.6 LNS Packaging, Distribution, and Recommended Intake among Implemented and Planned LNS Interventions

Most of the implemented LNS interventions individually packaged the LNS product in pots (76%), while three interventions (17%) individually packaged the products as sachets (Table 5.6). The individual packages (pots or sachets) were bundled and distributed to participants in boxes by most of the interventions (82%); however, 18% did not use box or bag packaging for bulk distribution of the individual LNS product to participants. The most frequently reported quantity of LNS product distributed per pot was 325 g (71%), followed by 20 g (18%) for sachets.

Implemented interventions delivered the LNS through multiple channels, including 71% distributing through health facilities. Only interventions in sub-Saharan Africa reported distributing through the general food distribution (29%), while the two interventions in Latin America and the Caribbean reported distribution only through scheduled events and community-based distribution. For each of the 17 LNS interventions, Figure 3 describes the frequency of LNS distribution, quantity distributed, and suggested intake schedules. For 82% of the interventions, the LNS product was distributed to participants once a month and 77% gave participants four pots at each distribution. The most common recommended LNS intake was for those receiving pots, and participants were told to consume three teaspoons of the LNS product three times a day (71%). Interventions distributing LNS in sachets recommended one sachet a day. For two interventions, the entire sachet was to be consumed in one sitting, while the intervention in sub-Saharan Africa recommended consuming the LNS sachet two times a day, half a sachet each time. Appendix E summarizes the LNS regimen for each intervention by country and target group, and describes the distribution method, frequency of distribution to participants, number of pots or sachets given to participants at each distribution, recommended LNS intake schedule, and the LNS formulation.

For the three planned LNS interventions, two interventions expected to distribute the LNS product as individual sachets (data not shown) and one intervention reported plans to bundle the sachets in bags for distribution to participants. One intervention in sub-Saharan Africa expected to distribute LNS through the health facility, while another intervention in East Asia and the Pacific region would

distribute through both scheduled events and community-based distribution. All three interventions planned to distribute the LNS products once a month. The intervention in the East Asia and Pacific region reported plans to distribute 60 sachets of 25 g each (medium quantity LNS formulation) every month with a recommended daily intake of two sachets.

Table 5.6 Implemented interventions including LNS: LNS distribution, packaging, and recommended intake, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
LNS packaging for distribution	Box	14	82.3	10	71.4	1	7.1	1	97.1	2	14.2
	None	3	17.6	2	66.7	0	0.0	1	33.3	0	0.0
Type of individual packaging	Pot	13	76.4	10	76.9	0	0.0	2	15.4	1	7.7
	Sachet	3	16.7	1	33.3	1	33.3	0	0.0	1	33.3
	Unknown	1	5.9	1	100	0	0.0	0	0.0	0	0.0
LNS Product quantity in grams per unit	325g	12	70.6	9	75.0	0	0.0	2	16.7	1	8.3
	47g	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	20g	3	17.7	1	33.3	1	33.3	0	0.0	1	33.3
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
LNS distributed through [b]	Health facility	12	70.6	10	83.3	0	0.0	2	16.6	0	0.0
	Scheduled events [c]	7	41.2	4	57.1	0	0.0	1	14.3	2	28.6
	Community-based [d]	6	35.3	3	50.0	1	16.7	0	0.0	2	33.3
	General food distribution	5	29.4	5	100	0	0.0	0	0.0	0	0.0
Frequency of distribution of LNS to participants	Once a month	14	82.4	10	71.4	0	0.0	2	14.3	2	14.3
	Other [f]	3	17.6	2	66.7	1	33.3	0	0.0	0	0.0
Number of pots or sachets given at each distribution	4 (pots)	13	76.5	10	76.9	0	0.0	2	15.4	1	7.7
	5 (pots)	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	28 (sachets)	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	30 (sachets)	1	5.9	0	0.0	0	0.0	0	0.0	1	100
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Recommended LNS intake schedule	3 teaspoons, 3 times per day	12	70.6	9	75.0	0	0.0	2	16.7	1	8.3
	1 sachet per day	2	11.8	0	0.0	1	50.0	0	0.0	1	50.0
	½ sachet, twice a day	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Missing	2	11.8	2	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.

[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of scheduled events include child health days, immunization campaigns, and outreach.
[d] Examples of community-based include groups or house visits and community events.
[e] Examples of private sector include shops, pharmacies, and drug stores.
[f] Other distribution schemes were defined as once a week for eight weeks and then a break of 4 months; every two months; or depending on nutritional status of children

Figure 5.3 Implemented LNS interventions, frequency of LNS distribution, quantity distributed, and suggested intake, Home Fortification Global Assessment 2011

<table>
<tr><th>Implemented LNS interventions (N= 17) [a]</th><th>Frequency of distribution</th><th>Quantity</th><th>Suggested intake</th></tr>
<tr><td>1</td><td rowspan="14">Monthly</td><td rowspan="10">4 Pots</td><td rowspan="6">1 pot per child per week</td></tr>
<tr><td>2</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td><td rowspan="3">3 tablespoons, 3X a day per child</td></tr>
<tr><td>8</td></tr>
<tr><td>9</td></tr>
<tr><td>10</td><td>Missing</td></tr>
<tr><td>11</td><td>5 Pots</td><td>3 tablespoons, 3X a day per child</td></tr>
<tr><td>12</td><td>28 Sachets</td><td>1/2 a sachet per child per day</td></tr>
<tr><td>13</td><td>30 Sachets</td><td>1 sachet per child per day</td></tr>
<tr><td>14</td><td>Missing</td><td>3 tablespoons, 3X a day per child</td></tr>
<tr><td>15</td><td>Bi-monthly</td><td>60 Sachets</td><td>1 sachet per child per day</td></tr>
<tr><td>16</td><td>Bi-annually</td><td>8 Pots</td><td>4 pots per month/child for two consecutive months, then 4 month break</td></tr>
<tr><td>17</td><td>Emergency setting, as required</td><td>4 Pots</td><td>1 pot per child per week</td></tr>
</table>

[a] Each row in the first column represents one of the 17 implemented LNS interventions; read across each row for the frequency of distribution, quantity distributed, and suggested LNS intake for that specific intervention.

5.7 LNS Behaviour Change Strategy among Implemented and Planned LNS Interventions

Among the 17 LNS interventions, 82% had a behaviour change communication (BCC) strategy in place (Table 5.7). Only interventions in sub-Saharan Africa reported the use of mass media channels as part of their strategy such as radio spots (18%) and billboards (12%), while other (24%) mass media

descriptions included posters, official launches, community mobilization and sensitizations. Almost all implemented LNS interventions included interpersonal communication strategies with group meetings and counselling as the most frequently mentioned (82%), followed by individual meetings and counselling communication (53%). The intervention packages also included distribution of print media (59%), while only two interventions (12%) used the LNS box or bag packaging as a means to communicate information to participants.

The BCC strategies were most frequently delivered by government personnel (59%), NGO personnel (47%), or community health workers (47%). Providers and distributors of LNS were primarily trained through group orientations and trainings (82%) and received written or electronic information (59%). Interventions typically gave various reasons to justify and motivate participants to use the LNS product; the most frequently reported reasons were to enhance development and growth (77%), and to improve health and prevent illness (65%). Additional messages focused on increasing appetite (35%), weight gain (29%), being stronger or more active (29%) and preventing anemia (18%).

The three planned LNS interventions were developing plans for the BCC component of their intervention package, but at the time of the assessment nothing was in place yet (data not shown). They provided no details about the specific BCC strategies they were planning to use, who would deliver the BCC strategies, training, or the reasons they were going to tell participants to use the LNS product.

Table 5.7 Implemented interventions including LNS: LNS behavior change communication strategy [a], by region, Home fortification Global Assessment 2011

		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
BCC strategy in place [b]	Yes	14	82.4	9	64.3	1	7.1	2	14.3	2	14.3
	No	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	Don't know	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Mass media channels [b]	Billboards	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	Radio Spots	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	Other mass media	4	23.5	4	100	0	0.0	0	0.0	0	0.0
Interpersonal communication channels [b]	Group meetings/ counselling	14	82.4	10	71.4	0	0.0	2	14.3	2	14.3
	Individual meetings /counselling	9	52.9	5	55.6	0	0.0	2	22.2	2	22.2
	Other interpersonal communication strategies	3	23.5	1	33.3	0	0.0	0	0.0	2	66.6

		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
Other communication materials/ strategies [b]	Distribution of print media [c]	10	58.8	6	60.0	0	0.0	2	20.0	2	20.0
	LNS box/bag	2	11.8	2	100	0	0.0	0	0.0	0	0.0
Personnel charged with delivering BBC strategies [b]	Government personnel	10	58.8	8	80.0	0	0.0	2	20.0	0	0.0
	NGO personnel	8	47.1	5	62.5	0	0.0	1	12.5	2	25.0
	Community health workers, including paid personnel & volunteers	8	47.1	3	37.5	1	12.5	2	25.0	2	25.0
	WFP or UNICEF staff	3	17.6	2	66.7	0	0.0	1	33.3	0	0.0
Training directed at providers and distributors of LNS are delivered through [b]	Group orientation/training	14	82.4	9	64.3	1	7.1	2	14..3	2	14.3
	Individual orientation/training	6	35.3	2	33.3	0	0.0	2	33.3	2	33.3
	Written or electronic information about LNS distributed	10	58.8	6	60.0	0	0.0	2	20.0	2	20.0
	Other training or BCC strategies	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Additional messages on the reason to give LNS [d]	Develop better/grow better	13	76.5	8	61.5	1	7.7	2	15.4	2	15.4
	Healthier/less sick	11	64.7	7	63.3	1	9.1	1	9.1	2	18.2
	Increased appetite	6	35.3	3	50.0	0	0.0	1	16.7	2	33.3
	Increased weight gain	5	29.4	4	80.0	0	0.0	1	20.0	0	0.0
	Stronger/more active	5	29.4	3	60.0	0	0.0	2	40.0	0	0.0
	Prevent anemia	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	Improved brain development/ Intelligence [e]	2	11.8	0	0.0	0	0.0	0	0.0	2	100
	Other messages[f]	2	11.8	2	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of print media include cards, brochures, leaflets, stickers, and calendars
[d] Results from closed ended questions only
[e] Includes child more intelligent, improve IQ, better school performance, improved brain and mental development
[f] Includes 1) prevent severe acute malnutrition and 2) to enhance growth monitoring for the targeted children and provide essential fatty acids.

5.8 Development of Local Names and Images, and Messaging on LNS Packaging among Implemented and Planned LNS Interventions

Most implemented LNS interventions did not develop a local name (88%) or image (94%) for the LNS product (Table 5.8). Over half of the interventions (53%) had missing data for any messages on the LNS sachet or pot, and it is likely that some interventions did not report the standard generic information included by the manufacturers on the pot or sachet. Among those that did report messages, 24% included instructions on use, 18% included a product description, 12% instructions on storage, 12% warnings, and 12% information on the target age for the product. Only one intervention in Kenya reported it had messages written on the LNS box or bag used to distribute the LNS pots/sachets, and these included messages on storage, the quantity per box, expiration date, and company name (data not shown).

Among the three planned interventions, the intervention in East Asia and the Pacific was developing a local name and local image for the LNS product, while one intervention in sub-Saharan Africa reported a local name was being developed and one reported that a local image was developed that would be displayed on the sachet. No interventions reported messages to be included on the sachet or pot and one intervention in Niger reported that the Nutriset instructions for use were on the box or bag used to distribute the LNS pots/sachets.

Table 5.8 Interventions currently distributing LNS: Development of local names and images for LNS, and messages on packages, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Local name developed for LNS	No	15	88.2	10	66.7	1	6.7	2	13.3	2	13.3
	Don't know	2	11.8	2	100	0	0.0	0	0.0	0	0.0
Local image developed for LNS	No	16	94.1	11	68.8	1	6.3	2	12.5	2	12.5
	Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Message topics written on LNS sachet or pot include[b]	Instructions on use	4	23.5	2	50.0	1	25.0	1	25.0	0	0.0
	Product description	3	17.6	2	66.7	0	0.0	1	33.3	0	0.0
	Instructions on storage	2	11.8	0	0.0	1	50.0	1	50.0	0	0.0
	Warnings	2	11.8	1	50.0	1	50.0	0	0.0	0	0.0
	Target group	2	11.8	2	100	0	0.0	0	0.0	0	0.0
	Manufacturing information	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Composition	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Breast milk is best food	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Manufacturers instructions	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Missing	9	52.9	7	77.8	0	0.0	0	0.0	2	22.2

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%

5.9 Monitoring and Evaluation among Implemented and Planned LNS Interventions

Over two thirds (77%) of the implemented LNS interventions had a monitoring and evaluation plan in place (Table 5.9). The interventions most frequently collected monitoring information on appropriate use of LNS (82%), coverage (77%), supplies (65%), and BCC strategies (53%). Among the interventions, 77% were carrying out impact evaluations, and among these the most common impact indicators were growth (100%) and feeding practices (46%). Four interventions (24%) had a plan in place to address reports of adverse effects of LNS use.

The three planned LNS interventions reported that their monitoring and evaluation plans were under development (data not shown). They did not provide further information related to the components of their programs being monitored, impact evaluation plans or their strategies to deal with adverse effects of LNS use.

Table 5.9 Implemented interventions including LNS: Monitoring and evaluation plans, focus and indicators, by region [a], Home fortification Global Assessment 2011

Item			Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
			n	%	n	%	n	%	n	%	n	%
LNS interventions implemented			17	100	12	70.6	1	5.8	2	11.8	2	11.8
Monitoring and evaluation plan in place		Yes	13	76.5	9	69.2	0	0.0	2	15.4	2	15.4
		No	2	11.8	2	100	0	0.0	0	0.0	0	0.0
		Under development	1	5.9	0	0.0	1	100	0	0.0	0	0.0
		Missing	1	5.9	1	100	0.0	0	0.0	0	0	0.0
Monitoring information collected on:	LNS procurement	Yes	5	29.4	4	80.0	0	0.0	1	20.0	0	0.0
		No	10	58.8	6	60.0	1	10.0	1	10.0	2	20.0
		Under development	1	5.9	1	100	0	0.0	0	0.0	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	LNS supplies	Yes	11	64.7	9	81.8	0	0	2	18.2	0	0.0
		No	5	29.4	2	40.0	1	20.0	0	0.0	2	40.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Training with providers and distributors	Yes	7	41.2	3	42.9	1	14.3	1	14.3	2	28.6
		No	9	52.9	8	88.9	0	0	1	11.1	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Behaviour change communication strategy	Yes	9	52.9	5	55.6	0	0.0	2	22.2	2	22.2
		No	6	35.3	5	83.3	1	16.7	0	0.0	0	0.0
		Under development	1	5.9	1	100	0	0.0	0	0.0	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	LNS coverage	Yes	13	76.5	9	69.2	1	7.7	1	7.7	2	15.4
		No	3	17.6	2	66.7	0	0.0	1	33.3	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0

Item			Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
			n	%	n	%	n	%	n	%	n	%
	Appropriate use of LNS	Yes	14	82.4	9	64.3	1	7.1	2	14.3	2	14.3
		No	1	5.9	1	100	0	0.0	0	0.0	0	0.0
		Under development	1	5.9	1	100	0	0.0	0	0.0	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Impact evaluations conducted (planned)		Yes	13	76.5	10	76.9	0	0.0	1	7.7	2	15.4
		No	3	17.6	1	33.3	1	33.3	1	33.3	0	0.0
		Missing	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Impact indicators for impact evaluations (n=13) [b, c]		Growth	13	100	10	76.9	0	0.0	1	7.7	2	22.2
		Feeding practices	6	46.2	3	50.0	0	0.0	1	16.7	2	15.4
		Anemia	2	15.4	2	100	0	0.0	0	0.0	0	0.0
		Other	2	15.4	2	100	0	0.0	0	0.0	0	0.0
Strategy to deal with adverse effects of LNS		Yes	4	23.5	1	25.0	1	25.0	2	50.0	0	0.0
		No	9	52.9	7	77.8	0	0.0	0	0.0	2	22.2
		Under development	2	11.8	2	100	0	0.0	0	0.0	0	0.0
		Missing	2	11.8	2	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%
[b] Growth includes responses such as anthropometric indicators; underweight; weight, height and health

5.10 Coordination and Information Sharing among Implemented and Planned LNS Interventions
Among the 17 implemented LNS interventions, 77% had a coordinating body that oversaw the development and implementation of the LNS intervention (Table 5.10). None of the interventions in the Middle East and North Africa or Latin America and the Caribbean regions had a coordinating body involved in the intervention. Almost all of the interventions (94%) shared information with groups not directly involved in the intervention; this occurred most frequently with health authorities (69%) and the general public (31%).

Among the three planned LNS interventions, none had established a coordinating body to oversee the development and implementation of the LNS intervention (data not shown). One intervention in sub-Saharan Africa and one in East Asia and the Pacific reported they shared information about the intervention with those not involved, including health authorities and consumer groups (intervention in sub-Saharan Africa only).

Table 5.10 Implemented interventions including LNS Coordination and information sharing, by region [a], Home fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		Middle East and North Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Intervention coordinating body [b]	Yes	13	76.5	11	84.6	0	0.0	2	15.4	0	0.0
	No	4	23.5	1	25.0	1	25.0	0	0.0	2	50.0
Information sharing [c]	Yes	16	94.1	11	68.8	1	6.2	2	12.5	2	12.5
	No	1	5.9	1	100	0	0.0	0	0.0	0	0.0
Among interventions that share information (n=16), who they share it with [d]	Health Authorities	11	68.8	6	54.5	1	9.1	2	18.2	2	18.2
	General public	5	31.3	2	40.0	0	0.0	1	20.0	2	40.0
	Media	3	18.8	1	33.3	0	0.0	0	0.0	2	66.7
	Consumer groups	3	18.8	3	100	0	0.0	0	0.0	0	0.0
	Other	7	43.8	5	71.4	0	0.0	0	0.0	2	28.6

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Availability of coordinating body that oversees the development and implementation of the LNS intervention.
[c] Carry out information sharing with those who are not directly involved with the intervention.
[d] Multiple choice answers, totals may equal more than 100%

5.11 Main Challenges among Implemented and Planned LNS Interventions

The 17 implemented LNS interventions were asked to report the top three challenges for the intervention. Funding for the LNS product was mentioned most frequently (65%), and by interventions across all regions (Table 5.11), followed by monitoring and evaluation (53%) and adherence (35%). For interventions in Latin America and the Caribbean, challenges centred on funding and procurement, while in other regions the challenges covered three or more domains.

For the three planned LNS interventions, two interventions reported coordination was a challenge and six other challenges were reported by one intervention each (data not shown). Other than challenges with coordination, the interventions in sub-Saharan Africa reported technical challenges related to program design, monitoring and evaluation, adherence and acceptability, while the intervention in East Asia and the Pacific reported funding challenges.

Table 5.11 Implemented interventions including LNS: Main challenges to implementation, by region[a], Home fortification Global Assessment 2011

		Total		sub-Saharan Africa		Middle east and north Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%	n	%
LNS interventions implemented		17	100	12	70.6	1	5.8	2	11.8	2	11.8
Main challenges to implementation [b] [c]	Funding for product	11	64.7	7	63.6	1	9.1	1	9.1	2	18.2
	Monitoring and evaluation	9	52.9	7	77.8	1	11.1	1	11.1	0	0.0
	Adherence	6	35.3	5	83.3	0	0.0	1	16.7	0	0.0
	Technical assistance or programme support	4	23.5	3	75.0	0	0.0	1	25.0	0	0.0
	Procurement	4	23.5	1	25.0	0	0.0	1	25.0	2	50.0
	Funding for delivery	4	23.5	2	50.0	0	0.0	0	0.0	2	50.0
	Programme design	3	17.6	3	100	0	0.0	0	0.0	0	0.0
	Training	2	11.8	1	50.0	0	0.0	1	50.0	0	0.0
	Acceptability by health community	1	5.9	0	0.0	1	100	0	0.0	0	0.0
	Acceptability by intervention participants	1	5.9	1	100	0	0.0	0	0.0	0	0.0
	Acceptability by government	1	5.9	0	0.0	1	100	0	0.0	0	0.0
	Acceptability by intervention ECHO [d]	1	5.9	1	100	0	0.0	0	0.0	0	0.0

[a] No respondents reported LNS interventions currently implemented in the South Asia or Central and Eastern Europe region.
[b] Multiple choice answers, totals may equal more than 100%
[c] Interventions were asked to mark the top three challenges confronted by the intervention
[d] European Commission's Humanitarian Aid Office (ECHO)

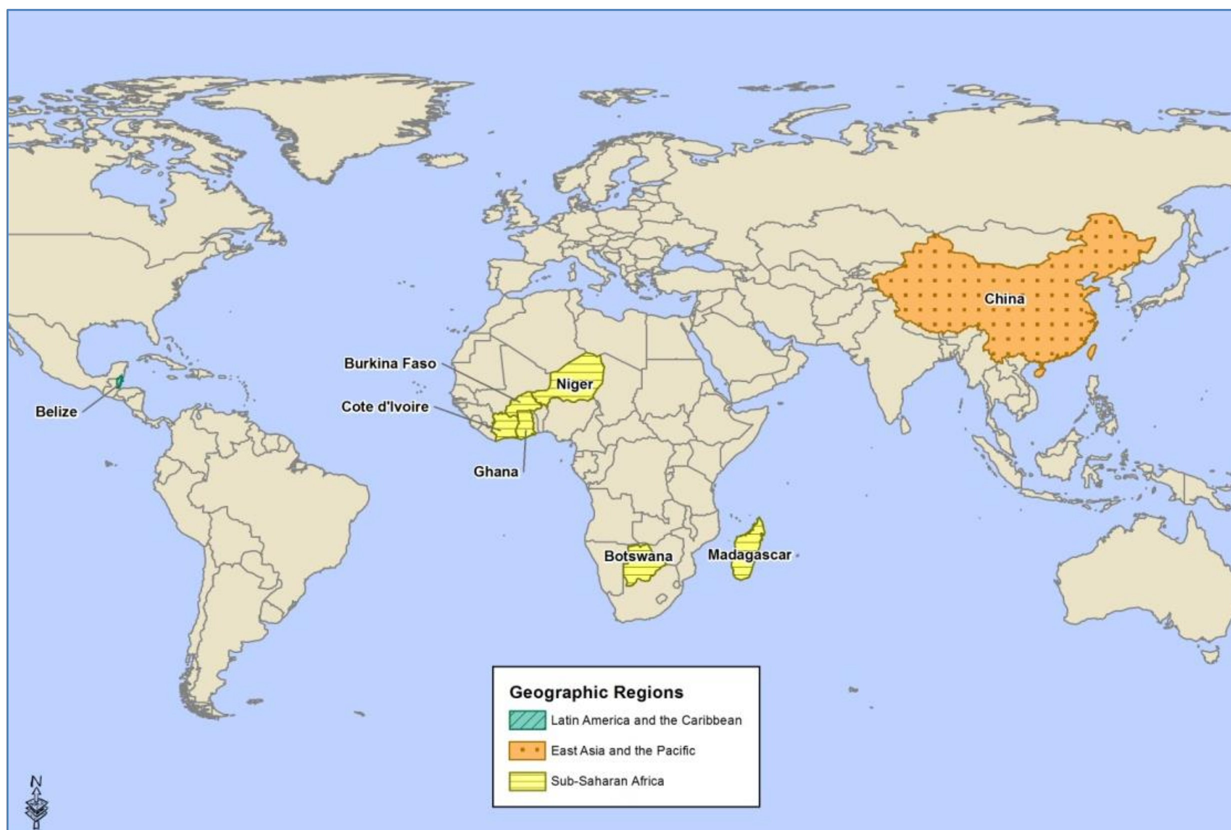
CHAPTER 6: IMPLEMENTED AND PLANNED POWDERED COMPLEMENTARY FOOD SUPPLEMENT (CFS) INTERVENTIONS

Table 6.0 shows that 12 powdered complementary food supplement (CFS) interventions were currently implemented in sub-Saharan Africa (75%), East Asia and the Pacific (17%), and the Latin America and the Caribbean (8%) regions. Figure 6.1 highlights the 8 countries implementing the 12 interventions. Among these countries, four have multiple CFS interventions including Botswana (n=2), Burkina Faso (n=2), China (2), and Madagascar (n=2). There were no CFS interventions being planned to start within the next 12 months in any of the regions. Respondents from 18 countries that do not currently have CFS interventions being implemented or planned reported that they have interest in starting interventions in the future; 72% were from sub-Saharan Africa.

Table 6.0 Total number of CFS interventions implemented and by region, Home Fortification Global Assessment 2011

Item	Total		sub-Saharan Africa		Middle East & North Africa		South Asia		East Asia and Pacific		Latin America and the Caribbean		Central and Eastern Europe	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Total CFS interventions currently implemented	12	100	9	75.0	0	0.0	0	0.0	2	16.7	1	8.3	0	0.0

Figure 6.1 Countries with implemented CFS interventions by region, n=12 interventions in 8 countries, [a] **Home Fortification Global Assessment 2011**



[a] Four countries have more than one CFS interventions including Botswana (n=2), Burkina Faso (n=2), China (2), and Madagascar (n=2)

6.1 Objectives, Expected Outcomes and Multi-Sectorial Approaches among Implemented CFS Interventions

Multiple objectives were reported for the 12 CFS interventions, with virtually all of them aiming to address micronutrient deficiencies (92%) and improve complementary feeding (92%). Improving nutritional status (67%) was the most commonly expected outcome of the interventions. All of the interventions were integrated into multi-sectorial approaches, most frequently integrated into infant and young child feeding programmes (83%) and micronutrient deficiency prevention and control programmes (83%).

Table 6.1 Interventions currently distributing CFS: intervention objective, expected primary outcome of the intervention, degree and type of integration, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Objective(s) of the CFS Intervention [b]	Micronutrient deficiency prevention and control	11	91.7	9	81.8	2	18.2	0	0.0
	Improved complementary feeding	11	91.7	6	54.5	2	18.2	1	9.0
	Stunting reduction	9	75.0	7	77.8	2	22.2	0	0.0
	Anemia prevention and control	9	75.0	7	77.8	2	22.2	0	0.0
Expected outcome	Improve nutrition status	8	66.7	7	87.5	0	0.0	1	12.5
	Reduce anemia	2	16.7	0	0.0	2	100	0	0.0
	Prevent vitamin and mineral deficiencies	1	8.3	1	100	0	0.0	0	0.0
	Missing	1	8.3	1	100	0	0.0	0	0.0
Distribution approach	Free/public distribution	6	50.0	3	60.0	2	40.0	1	14.3
	Paid by participant	6	50.0	6	85.7	0	0.0	0	0.0
CFS is part of integrated program	Integrated multi-sectorial approach	12	100	9	75.0	2	16.7	1	8.3
	Stand-alone intervention, not integrated	0	0.0	0	0.0	0	0.0	0	0.0
Integrated multi-sectorial approach (n=12) as part of [b]	Infant and young child feeding programme	10	83.3	7	70.0	2	20.0	1	10.0
	Micronutrient deficiency prevention and control programme	10	83.3	9	90.0	0	0.0	1	10.0
	Anemia prevention and control programme	7	58.3	6	85.7	0	0.0	1	14.3
	Humanitarian response programme	4	33.3	1	25.0	2	50.0	1	25.0
	Other programmes [c]	3	25.0	3	100	0	0.0	0	0.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] Multiple choice answers, totals may equal more than 100%
[c] Other reported programmes included community growth monitoring (n=2) and income generation (n=1)

6.2 Organizations Supporting the Intervention, Funding Sources, Intervention Duration, and Intervention Scale among Implemented CFS Interventions

A total of 18 organizations[6] (data not shown) were reported being involved in the 12 CFS interventions, with an average of 3 organizations supporting each intervention (range 2-5). In Table 6.2, the most frequently mentioned organization types supporting the implementation of interventions included the national government (92%), followed by multilateral organizations (50%) and international NGO or Associations (42%). While national governments provided funding for one intervention (8%), multilateral organizations (58%) and international government agencies (50%) provided funding to half or more of the interventions. Participants were expected to pay for the CFS

[6] Organization types listed generically, e.g., "NGOs," were only counted once for each intervention.

in 50% of the interventions and the reported cost ranged from $0.05 to $0.25 USD per unit (data not shown). Among the interventions requiring participants to pay (six interventions in sub-Saharan Africa), three subsidized the cost.

Two of the implemented interventions (17%) began distributing CFS almost 20 years ago, and the rest started within the last decade, including seven interventions (58%) since 2008. Half of the interventions are currently implementing at sub-national scale, and 33% distribute at national scale. The four interventions at national scale are in Botswana (n=2), Niger, and Belize. The intervention in Belize is national but only distributes to children identified as malnourished or at risk. The planned final scale of distribution for the 12 interventions is sub-national (42%) and national (58%). Among those planning national level distribution, most will be in sub-Saharan Africa (57%), as well as East Asia and the Pacific (29%) and Latin America and the Caribbean (14%).

Table 6.2 Interventions including CFS: Funding source, length of distribution, scale of intervention today and in the future, by region, [a] Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia & Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS Interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Types of organizations involved in supporting the implementation of the intervention [b]	National government	11	91.7	8	72.7	2	18.2	1	9.1
	Multilateral	6	50.0	4	66.7	2	33.3	0	0.0
	International NGO	5	41.7	5	100	0	0.0	0	0.0
	Local NGO/ Association	2	16.7	1	50.0	0	0.0	1	50.0
Funding source [b]	Multilateral	7	58.3	4	57.1	2	28.6	1	14.3
	International Government/Agency	6	50.0	6	100	0	0.0	0	0.0
	Local NGO/Association	3	25.0	3	100	0	0.0	0	0.0
	National Government	1	8.3	1	100	0	0.0	0	0.0
	Private [c]	1	8.3	1	100	0	0.0	0	0.0
	International NGO	1	8.3	0	0.0	1	100	0	0.0
	Unidentified organization [d]	1	8.3	1	100	0	0.0	0	0.0
Started distribution	1993	2	16.7	2	100	0	0.0	0	0.0
	2002	1	8.3	1	100	0	0.0	0	0.0
	2005	1	8.3	1	100	0	0.0	0	0.0
	2008	3	25.0	3	100	0	0.0	0	0.0
	2009	1	8.3	1	100	0	0.0	0	0.0
	2010	2	16.7	0	0.0	2	100	0	0.0
	2011	1	8.3	0	0.0	0	0.0	1	100
	Missing	1	8.3	0	0.0	0	0.0	0	0.0
Current scale of CFS distribution	Pilot	2	16.7	2	100	0	0.0	0	0.0
	Sub-National	6	50.0	4	66.7	2	33.3	0	0.0

Item		Total		sub-Saharan Africa		East Asia & Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
	National	4	33.3	3	75.0	0	0.0	1	25.0
Planned final scale of CFS distribution	Sub-national distribution	5	41.7	5	100	0	0.0	0	0.0
	National distribution	7	58.3	4	57.1	2	28.6	1	14.3

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions

[b] Multiple choice answers, totals may equal more than 100%

[c] Private defined as private companies, such as DSM

[d] Reported as "partners" or "other partners"

6.3 Target Groups and Numbers of Participants Reached among Implemented CFS Interventions

Among the 12 CFS interventions, the most frequently reported group was children 6-23 months of age (58%), however, in sub-Saharan Africa five additional groups were also mentioned including pregnant and lactating women and households (Table 6.3).

In 2010 over 1.7 million participants were reached through CFS interventions with the range of participants reached ranging from less than 1,000 to over 500,000. Among these, 33% reached between 25,000 and 100,000 participants. The two interventions in East Asia and the Pacific each reached less than 25,000 participants in 2010, while two interventions in sub-Saharan Africa reached over 500,000 participants and one reached over 100,000 participants. In 2011, a total of 1.95 million participants were expected to be reached with 42% of the interventions expecting to reach between 25,000 and 100,000 participants.

Table 6.3 Interventions currently distributing CFS: Target groups and the number of participants reached in 2010 and expected in 2011, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub- Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS Interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Target Group [b, c]	6-23 months	7	58.3	4	57.1	2	28.6	1	14.3
	6-36 months	1	8.3	1	100	0	0.0	0	0.0
	12-59 months	1	8.3	1	100	0	0.0	0	0.0
	37-59 months	1	8.3	1	100	0	0.0	0	0.0
	Pregnant and lactating women	1	8.3	1	100	0	0.0	0	0.0
	Household	1	8.3	1	100	0	0.0	0	0.0
Number of participants reached by intervention in 2010 [b, d]	1 < 1000	1	8.3	1	100	0	0.0	0	0.0
	1,000 < 10,000	2	16.7	1	50.0	1	50.0	0	0.0
	10,000 < 25,000	1	8.3	0	0.0	1	100	0	0.0
	25,000 < 100,000	4	33.3	4	100	0	0.0	0	0.0
	100,000 < 500,000	1	8.3	1	100	0	0.0	0	0.0
	>500,000	2	16.7	2	100	0	0.0	0	0.0
	Missing	1	8.3	0	0.0	0	0.0	1	100

Item		Total		sub- Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
Number of participants expected to be reached in 2011 [c, e]	1 < 1000	1	8.3	0	0.0	0	0.0	1	100
	1,000 < 10,000	2	16.7	1	50.0	1	50.0	0	0.0
	10,000 < 25,000	1	8.3	1	100	0	0.0	0	0.0
	25,000 < 100,000	5	41.7	4	80.0	1	20.0	0	0.0
	100,000 < 500,000	1	8.3	1	100	0	0.0	0	0.0
	>500,000	2	16.7	2	100	0	0.0	0	0.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] In 2010, implemented CFS interventions expected to reach: 1,560,000 children 6-23 months; 65,700 children 6-36 months; 38,500 pregnant and lactating women; 93,060 other group.
[c] In 2011, implemented CFS interventions expected to reach: 1,696,400 children 6-23 months; 70,000 children 6-36 months; 60,000 pregnant and lactating women; 128,000 other group.
[d] In 2010, implemented CFS interventions expected to reach the following number of participants in each region: 1,725,260 sub-Saharan Africa; 32000 East Asia and Pacific; not reported Latin America & the Caribbean.
[e] In 2011, implemented CFS interventions expected to reach the following number of participants in each region: 1,920,000 sub-Saharan Africa; 34,000 East Asia and Pacific; 400 Latin America & the Caribbean.

6.4 CFS formulation, Iron Compounds, Registrations and Approvals among implemented CFS Interventions

Appendix D includes the quantities for each nutrient in the CFS formulations as reported by the interventions. There was heterogeneity in the iron compounds reported for the CFS products with six different iron compounds, or combinations, mentioned (Table 6.4).

For half of the interventions CFS was registered in the country, while for 42% the product was not registered. Among those registered, 67% were registered as a food and 34% as a nutrition or food supplement. The majority of interventions (83%) obtained government approval to distribute CFS in the country.

Table 6.4 Interventions currently distributing CFS: CFS Formulation, iron compounds, CFS country registration and government approvals, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Iron compound in the formulation	Microencapsulated Ferrous fumarate	2	16.7	2	100	0	0.0	0	0.0
	Electrolytic iron	2	16.7	2	100	0	0.0	0	0.0
	NaFeEDTA [b] & Ferrous fumarate	2	16.7	0	0.0	2	100	0	0.0
	NaFeEDTA [b]	1	8.3	1	100	0	0.0	0	0.0
	Amino chelated iron	1	8.3	0	0.0	0	0.0	1	100
	Ferrous sulfate	1	8.3	1	100	0	0.0	0	0.0
	Unknown	3	25	3	100	0	0.0	0	0.0
CFS registered in the country	Yes	6	50.0	4	66.7	2	33.3	0	0.0
	No	5	41.7	4	80.0	0	0.0	1	20.0
	Under government review	1	8.3	1	100	0	0.0	0	0.0
Registration category	Food	4	66.6	2	50.0	2	50.0	0	0.0
	Nutrition/food supplement	2	33.3	2	100	0	0.0	0	0.0
Government approval for CFS use in country [c]	Yes	10	83.3	8	80.0	2	20.0	0	0.0
	Missing	2	16.7	1	50.0	0	0.0	1	50.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] Sodium iron ethylenediaminetetraacetic acid (NaFeEDTA)
[c] Government approval for use of CFS in country may include an ethical clearance, proof of safety, or standard established.

6.5 CFS Procurement, Manufacturers, Patents and Quality among Implemented CFS Interventions

Table 6.5 show that GRET (33%) and UNICEF (25%) procured more than half of the CFS product for interventions. GRET procured only for interventions in sub-Saharan Africa and UNICEF procured for interventions in East Asia and the Pacific and Latin America and the Caribbean regions. In the majority of cases (83%), the CFS product was manufactured locally (either partly or entirely) in country and at least eight different manufacturers were reported. For 42% of the interventions, the CFS product was protected by a patent or other legal arrangement.

Almost all interventions (92%) reported a protocol was in place to check the quality of the CFS product and 42% of interventions reported ever experiencing a quality problem with the CFS product. Descriptions of the quality problems included moisture affecting shelf life (n=2), short shelf life of only three months (n=1), laboratory testing of products showing different results (n=1), and weevil attack (n=1).

Table 6.5 Interventions currently distributing CFS: CFS procurement, manufacturing and quality assurance, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
CFS procurement	GRET	4	33.3	4	100	0	0.0	0	0.0
	UNICEF	3	25.0	0	0.0	2	66.7	1	33.3
	Government	2	16.7	2	100	0	0.0	0	0.0
	World Food Programme	2	16.7	2	100	0	0.0	0	0.0
	Protein Kesse-La	1	8.3	1	100	0	0.0	0	0.0
CFS product partly or entirely manufactured locally in country	Yes	10	83.3	8	80.0	2	20.0	0	0.0
	No	2	16.7	1	50.0	0	0.0	1	50.0
Product manufacturer	Biomate company	2	16.7	0	0.0	2	100	0	0.0
	Any local company winning the annual tender	2	16.7	2	100	0	0.0	0	0.0
	Enterprise TAF	2	16.7	2	100	0	0.0	0	0.0
	Local Production Unit	2	16.7	2	100	0	0.0	0	0.0
	Protein Kesse-La	1	8.3	1	100	0	0.0	0	0.0
	Italy, Belgium	1	8.3	1	100	0	0.0	0	0.0
	Alimentos S.A. (Guatemala)	1	8.3	0	0.0	0	0.0	1	100
	DSM South Africa	1	8.3	1	100	0	0.0	0	0.0
CFS protected by a patent or other legal arrangement	Yes	5	41.7	4	80.0	0	0.0	1	20.0
	No	6	50.0	4	66.7	2	33.3	0	0.0
	Don't know	1	8.3	1	100	0	0.0	0	0.0
Intervention has protocol to check the quality of CFS	Yes	11	91.7	9	81.8	2	18.2	0	0.0
	Don't know	1	8.3	0	0.0	0	0.0	1	100
Intervention ever experienced any problems with the quality of CFS	Yes	5	41.7	4	80.0	1	20.0	0	0.0
	No	7	58.3	5	71.4	1	14.3	1	14.3

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.

6.6 CFS Packaging, Distribution and Recommended Intake among Implemented CFS Interventions

In Table 6.6, two thirds of the CFS interventions packaged the individual units of CFS in sachets and distributed the CFS sachets to participants in bags. CFS sachet units came in various sizes (e.g., 450 grams, 2.5 kg, 5.5 kg, or 25 kg) and both individual and multi-serving units were used.

Because of the number of CFS units distributed at a time, typically the units are given to participants in a box or bag. However, only two CFS interventions reported distributing the same number of units per box or bag. Related to this, the quantity and number of units distributed may vary by age or weight of the participant, as well as the size of the individual packaging. Unlike MNP or LNS interventions, this led respondents to report almost completely different answers when asked the number of sachets given at each distribution (e.g., 4-5 pounds per child/month; 2 units for child 6-18 months and 3 units for child 19-36 months; purchase a packet every two weeks; need based; 8.33 rations per beneficiary; and 30 sachets). For future updates of the Home Fortification Global Assessment, the CFS questions should be revised related to the packaging and number of products given at distributions.

The interventions distributed CFS using multiple delivery systems and the most frequently mentioned were community-based (83%), health facility (50%), private sector (50%) and scheduled health facility events (42%). Half of the interventions distributed the CFS products once a month. The recommended CFS intake schedule varied with 33% reporting one sachet per day. Appendix E summarizes the CFS regimen for each intervention by country and target group, and describes the distribution method, frequency of distribution to participants, amount given to participants at each distribution, recommended CFS intake schedule, and the CFS formulation.

Table 6.6 Interventions currently distributing CFS: CFS packaging, distribution and recommended CFS intake, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
CFS packaging for distribution	Bag	8	66.7	5	62.5	2	25.0	1	12.5
	Box	1	8.3	1	100	0	0.0	0	0.0
	Missing	3	25.0	3	100	0	0.0	0	0.0
Type of individual packaging	Sachet	8	66.7	6	75.0	2	25.0	0	0.0
	Bag	2	16.7	2	100	0	0.0	0	0.0
	Measure	2	16.7	1	50.0	0	0.0	1	50.0
CFS distributed through [b]	Community-based [c]	10	83.3	7	70.0	2	20.0	1	10.0
	Health facility	6	50.0	3	50.0	2	33.3	1	16.7
	Private sector [d]	6	50.0	6	100	0	0.0	0	0.0
	Scheduled health facility events [e]	5	41.7	4	80.0	0	0.0	1	20.0
	General food distribution	1	8.3	1	100	0	0.0	0	0.0
Frequency of distribution of CFS to participants	Once a month	6	50.0	3	50.0	2	33.3	1	16.7
	Don't know	1	8.3	1	100	0	0.0	0	0.0
	Other	5	41.7	5	100	0	0.0	0	0.0
Recommended CFS	1 sachet per day	4	33.3	2	50.0	2	50.0	0	0.0

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
intake schedule	Other [f]	7	58.3	6	85.7	0	0.0	1	14.3
	Missing	1	8.3	1	100	0	0.0	0	0.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] Multiple choice answers, totals may equal more than 100%
[c] Examples of community-based include groups or house visits and community events.
[d] Examples of private sector include shops, pharmacies, and drug stores.
[e] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[f] One intervention from Latin America and the Caribbean reported 3-4 cups every day. Six interventions from sub-Saharan Africa reported: 1 sachet for 2 weeks (n=1), 1 sachet for 3 days (n=1), 2 sachets per day (n=1), 250g per day (n=1), amount depends on child age and needs (n=2).

6.7 CFS Behavior Change Strategy among Implemented CFS Interventions

All of the 12 CFS interventions had a behavior change strategy in place for their interventions (Table 6.7). The intervention packages typically included a variety of mass media and inter-personal communication strategies. Multiple mass media channels disseminated information about the interventions and the most frequently reported included radio (58%), billboards (50%) and TV spots (33%). All of the intervention packages included group meetings and counseling, and all except one also reported individual meetings and counseling. Print media was also frequently distributed (83%) and 42% of the interventions used the packaging materials (bag or box) as a medium to convey information to participants. For almost all interventions (92%) government personnel were responsible for delivering the BCC to participants, while also more than half of the interventions also had NGO personnel (58%) and community health workers (58%) responsible.

Training for those who deliver the CFS intervention was most frequently carried out using group orientations and training (100%), individual orientations and trainings (67%), and distribution of written or electronic information (58%). The top reasons interventions told participants they should use CFS products included to support better development and growth (92%), improved health and less sickness (83%), increased weight gain (83%), increased strength and activity (75%), to prevent anemia (67%), and to improve brain development (50%). The intervention targeting pregnant and lactating women in Burkina Faso included messages about a healthy woman having a smoother pregnancy and that the CFS is the best benefit for the child during breastfeeding.

Table 6.7 Interventions currently distributing CFS: CFS behavior change communication (BCC) strategy, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
BCC strategy in place	Yes	12	100	9	75.0	2	16.7	1	8.3
Mass media channels [b]	Radio Spots	7	58.3	5	71.4	2	28.6	0	0.0
	Billboards	6	50.0	4	66.7	2	33.3	0	0.0
	TV Spots	4	33.3	2	50.0	2	50.0	0	0.0
	SMS/Text messages [c]	1	8.3	1	100	0	0.0	0	0.0
	Other mass media	6	50.0	5	85.7	1	14.3	0	0.0
Interpersonal communications channels [b]	Group meetings/counseling	12	100	9	75.0	2	16.7	1	8.3
	Individual meetings/counseling	11	91.7	8	72.7	2	18.2	1	9.1
	Other interpersonal communication strategies	5	41.7	4	80.0	0	0.0	1	20.0
Other communication materials/ strategies [b]	Distribution of print media [d]	10	83.3	7	70.0	2	20.0	1	10.0
	CFS box/bag	5	41.7	2	40.0	2	40.0	1	20.0
	Messages on T-shirts	1	8.3	1	100	0	0.0	0	0.0
Personnel charged with delivering BBC strategies [b]	Government personnel	11	91.7	8	72.7	2	18.2	1	9.1
	NGO personnel	7	58.3	7	100	0	0.0	0	0.0
	Community health workers	7	58.3	4	57.1	2	28.6	1	14.3
	Others	3	25.0	3	100	0	0.0	0	0.0
Training directed at providers and distributors of CFS are delivered through [b]	Group orientation/training	12	100	9	75.0	2	16.7	1	8.3
	Individual orientation/training	8	66.7	5	62.5	2	25.0	1	12.5
	Written or electronic information about CFS distributed	7	58.3	4	57.1	2	28.6	1	14.3
	Other training or behavior change communication strategies	3	25.0	0	0.0	2	66.7	1	33.3
Messages on the reason to give CFS [e]	Develop better/grow better	11	91.7	8	72.7	2	18.2	1	9.1
	Healthier/less sick	10	83.3	7	70.0	2	20.0	1	10.0
	Increased weight gain	10	83.3	7	70.0	2	20.0	1	10.0
	Stronger/more active	9	75.0	6	66.7	2	22.2	1	11.1
	Prevent anemia	8	66.7	5	62.7	2	25.0	1	12.5
	Improve brain development/ intelligence [f]	6	50.0	3	50.0	2	33.3	1	16.7
	Increased appetite	3	25.0	1	33.3	2	66.7	0	0.0
	Other messages	2	18.2	2	100	0	0.0	0	0.0

[a] No respondents reported CFS interventions implemented in the Middle East & North Africa, South Asia and Central and Eastern Europe regions.
[b] Multiple choice answers, totals may equal more than 100%
[c] Short Message Service (SMS) or text message is the text communication service component of phone, web or mobile communication systems. They allow the exchange of short text messages between fixed line or mobile phone devices.
[d] Examples of print media include cards, brochures, leaflets, stickers, and calendars
[e] Results from closed ended questions only
[f] Includes child more intelligent, improve IQ, better school performance, improved brain and mental development

6.8 Development of Local Names and Images, and Messaging on CFS among Implemented CFS Interventions

Table 6.8 shows that 75% of the CFS interventions developed a local name for the CFS product and 42% developed a local image (see Appendix F for the local names of products). Only interventions in sub-Saharan Africa developed a local image, and among those that did 60% displayed the image on the CFS sachet and 40% displayed the image on the packaging used to carry the sachets (e.g., box or bag).

The most frequently reported messages included on the CFS sachet were instructions to use the product (75%) and storage (67%), while some of the other messages included product description (33%) and composition (33%). The most frequently mentioned messages written on the CFS packaging used to carry the sachets (e.g., box or bag) were instructions on storage (33%) and use (33%).

Table 6.8 Interventions currently distributing CFS: Development of local names and images for CFS, and messages on packages, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Local name developed for CFS	Yes	9	75.0	7	77.8	2	22.2	0	0.0
	No	3	25.0	2	66.7	0	0.0	1	33.3
Local image developed for CFS	Yes	5	41.7	5	100	0	0.0	0	0.0
	No	5	41.7	3	60.0	2	40.0	0	0.0
	Missing	2	16.7	1	50.0	0	0.0	1	50.0
If local image developed (n=5), image displayed on [b]	Sachet	3	60.0	3	100	0	0.0	0	0.0
	Bag/box	2	40.0	2	100	0	0.0	0	0.0
Messages written on CFS sachet include [b]	Instruction on use	9	75.0	7	77.8	2	22.2	0	0.0
	Instructions on storage	8	66.7	6	75.0	2	25.0	0	0.0
	Product description	4	33.3	4	100	0	0.0	0	0.0
	Composition	4	33.3	4	100	0	0.0	0	0.0
	Manufacturing info	2	16.7	2	100	0	0.0	0	0.0
	Warnings	1	8.3	1	100	0	0.0	0	0.0
	Missing	3	25.0	2	66.7	0	0.0	1	33.3
Messages written on CFS box or bag include [b]	Instructions on storage	4	33.3	2	50.0	2	50.0	0	0.0
	Instructions on use	4	33.3	2	50.0	2	50.0	0	0.0
	Composition	2	16.7	2	100	0	0.0	0	0.0
	Manufacturing information	2	16.7	2	100	0	0.0	0	0.0
	Product description	1	8.3	1	100	0	0.0	0	0.0
	Missing	6	50.0	5	83.3	0	0.0	1	16.7

[a] No respondents reported CFS interventions currently implemented in the Middle East, North Africa, South Asia and Central & Eastern Europe regions.
[b] Multiple choice answers, totals may equal more than 100%

6.9 Monitoring and Evaluation among Implemented CFS Interventions

In Table 6.9, 92% of the CFS interventions reported a monitoring and evaluation plan was in place. CFS interventions most frequently collected monitoring information on coverage (92%), supplies (83%), BCC (83%), procurement (75%) and training (75%) while 42% also monitored appropriate use of the product. All but one intervention had conducted (or planned to conduct) an impact evaluation. Among those with impact evaluations, 91% included indicators of infant and young child feeding, 46% assessed anthropometry, and 30% measured anemia. Half of the interventions reported a plan in place to address reports of adverse effects associated with CFS use. Descriptions of some of these strategies included research and action on adverse effects (n=2), withdrawing the product from the market while reviewing the manufacturing processes (n=2), and having the monitoring team follow up with participants who reported problems (n=1).

Table 6.9 Interventions currently distributing CFS: Monitoring and evaluation plans, focus and indicators, by region [a], Home Fortification Global Assessment 2011

Item			Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
			n	%	n	%	n	%	n	%
CFS interventions implemented			12	100	9	75.0	2	16.7	1	8.3
Monitoring and evaluation plan in place		Yes	11	91.7	9	81.8	1	9.1	1	9.1
		No	1	8.3	0	0.0	1	100	0	0.0
Monitoring information collected on	CFS procurement	Yes	9	75.0	7	77.8	1	11.1	1	11.1
		No	3	25.0	2	75.0	1	25.0	0	0.0
	CFS supplies	Yes	10	83.3	8	80.0	1	10.0	1	10.0
		No	2	16.7	1	50.0	1	50.0	0	0.0
	Training with providers and distributors	Yes	9	75.0	7	77.8	1	11.1	1	11.1
		No	3	25.0	2	75.0	1	25.0	0	0.0
	BCC	Yes	10	83.3	8	80.0	1	10.0	1	10.0
		No	2	16.7	1	50.0	1	50.0	0	0.0
	CFS coverage	Yes	11	91.7	9	81.8	1	9.1	1	9.1
		No	1	8.3	0	0.0	1	9.1	0	0.0
	Appropriate use of CFS	Yes	5	41.7	4	80.0	1	20.0	0	0.0
		No	7	58.3	5	71.4	1	14.3	1	14.3
Impact evaluations conducted (or planned)		Yes	11	91.7	9	81.8	1	9.1	1	9.1
		No	1	8.3	0	0.0	1	100	0	0.0
Impact indicators for impact evaluations (n=11): [b]		Feeding practices and behaviors	10	90.9	8	80.0	1	10.0	1	10.0
		Anthropometry	5	45.5	4	80.0	0	0.0	1	20.0
		Anemia	3	30.0	1	33.3	1	33.3	1	33.3
		Iron status	2	18.2	1	50.0	0	0.0	1	50.0
Strategy for dealing with reports of adverse effects associated with CFS		Yes	6	50.0	5	83.3	1	16.7	0	0.0
		No	6	50.0	4	66.7	1	16.7	1	16.7

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.

[b] Multiple choice answers, totals may equal more than 100%

[c] Responses included anthropometric indicators (n=1), height and weight (n=1), nutritional status (n=2), and prevalence of malnutrition (n=1)

6.10 Coordination and Information Sharing among Implemented CFS Interventions

In Table 6.10, 92% of the implemented interventions reported that a coordinating body oversees the development and implementation of the CFS intervention. Almost all of the CFS interventions (92%) carry out information sharing with others not directly involved in the intervention; among these, all of the interventions share information with health authorities, 73% with consumer groups, 64% with the media, and 64% with the general public.

Table 6.10 Interventions currently distributing CFS: Coordination and information sharing, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Coordinating body [b]	Yes	11	91.7	9	81.8	1	9.1	1	9.1
	No	1	8.3	0	0.0	1	100	0	0.0
Information sharing [c]	Yes	11	91.7	9	81.8	1	9.1	1	9.1
	No	1	8.3	0	0.0	1	100	0	0.0
Among interventions that share information (n=11), who they share it with [d]	Health Authorities	11	100	9	81.8	1	9.1	1	9.1
	Consumer groups	8	72.7	5	62.5	2	25.0	1	12.5
	Media	7	63.6	5	71.4	2	28.6	0	0.0
	General public	7	63.6	5	71.4	2	28.6	0	0.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] Availability of coordinating body that oversees the development and implementation of the MNP intervention.
[c] Carry out information sharing with those who are not directly involved with the intervention.
[d] Multiple choice answers, totals may equal more than 100%

6.11 Main Challenges among Implemented CFS Interventions

CFS interventions reported a total of 13 main challenges to implementation (Table 6.11). Monitoring and evaluation was mentioned most frequently (67%) by the interventions. In addition, three or more interventions reported challenges with procurement (50%), funding for product (42%), adherence (33%), coordination (25%), and training (25%).

Table 6.11 Interventions currently using CFS: Main challenges to implementation, by region [a], Home Fortification Global Assessment 2011

Item		Total		sub-Saharan Africa		East Asia and Pacific		Latin America and the Caribbean	
		n	%	n	%	n	%	n	%
CFS interventions implemented		12	100	9	75.0	2	16.7	1	8.3
Main challenges to implementation [b,c]	Monitoring and evaluation	8	66.7	7	87.5	0	0.0	1	12.5
	Procurement	6	50.0	4	66.7	2	33.3	0	0.0
	Funding for product	5	41.7	3	60.0	2	40.0	0	0.0
	Adherence	4	33.3	3	75.0	0	0.0	1	25.0
	Coordination	3	25.0	1	33.3	2	66.7	0	0.0
	Training	3	25.0	2	66.7	0	0.0	1	33.3
	Acceptability by government	2	16.7	2	100	0	0.0	0	0.0
	Acceptability by intervention participants	2	16.7	2	100	0	0.0	0	0.0
	Technical assistance or programme support	2	16.7	2	100	0	0.0	0	0.0
	Funding for delivery	1	8.3	1	100	0	0.0	0	0.0
	Acceptability by health community	1	8.3	1	100	0	0.0	0	0.0
	Programme design	1	8.3	1	100	0	0.0	0	0.0
	Other [d]	1	8.3	1	100	0	0.0	0	0.0

[a] No respondents reported CFS interventions currently implemented in the Middle East and North Africa, South Asia and Central and Eastern Europe regions.
[b] Multiple choice answers, totals may equal more than 100%
[c] Interventions were asked to mark the top three challenges confronted by the intervention
[d] Other not described by respondent

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Appendix A. Countries targeted to participate in the Home Fortification Global Assessment 2011

Table A.1 Countries (n=152) by region [a] targeted to participate, Home Fortification Global Assessment 2011

Latin America and the Caribbean (n=29)	Central and Eastern Europe (n=20)	Middle East and North Africa (n=21)	West and Central Africa (n=24)	East and South Africa (n=21)	South Asia (n=8)	East Asia and Pacific (n=29)
Argentina	Albania	Algeria	Benin	Angola	Afghanistan	Brunei Darussalam
Antigua and Bermuda	Armenia	Bahrain	Burkina Faso	Botswana	Bangladesh	Cambodia
Barbados	Azerbaijan	Djibouti	Cameroon	Burundi	Bhutan	China
Belize	Belarus	Egypt	Cape Verde	Comoros	India	Cook Islands
Bolivia	Bosnia & Herzegovina	Iran	Central African Republic	Eritrea	Maldives	DPK Korea
Brazil	Bulgaria	Iraq	Chad	Ethiopia	Nepal	Fiji
Chile	Croatia	Jordan	Congo (Brazzaville)	Kenya	Pakistan	Indonesia
Colombia	Georgia	Kuwait	Cote d'Ivoire	Lesotho	Sri Lanka	Kiribati
Costa Rica	Kazakhstan	Lebanon	Democratic Republic of Congo	Madagascar		Lao PDR
Cuba	Kyrgyzstan	Libyan Arab Jamahiriya	Equatorial Guinea	Malawi		Malaysia
Dominica	Macedonia	Morocco	Gabon	Mozambique		Marshall Islands
Dominican Republic	Moldova	Oman	Gambia	Namibia		Micronesia (Federated States of)
Ecuador	Montenegro	Occupied Palestinian Territory	Ghana	Rwanda		Mongolia
El Salvador	Romania	Qatar	Guinea	Somalia		Myanmar
Grenada	Russian Federation	Saudi Arabia	Guinea Bissau	Somaliland		Nauru
Guatemala	Serbia	South Sudan	Liberia	South Africa		Niue
Guyana	Tajikistan	Sudan	Mali	Swaziland		Palau
Haiti	Turkey	Syrian Arab Republic	Mauritania	Tanzania		Papua New Guinea

Latin America and the Caribbean (n=29)	Central and Eastern Europe (n=20)	Middle East and North Africa (n=21)	West and Central Africa (n=24)	East and South Africa (n=21)	South Asia (n=8)	East Asia and Pacific (n=29)
Honduras	Ukraine	Tunisia	Niger	Uganda		Philippines
Jamaica	Uzbekistan	United Arab Emirates	Nigeria	Zambia		Republic of Korea
Mexico		Yemen	Sao Tome and Principe	Zimbabwe		Samoa
Montserrat			Senegal			Singapore
Nicaragua			Sierra Leone			Solomon Islands
Panama			Togo			Thailand
Paraguay						Timor Leste
Peru						Tonga
St. Kitts & Nevis						Tuvalu
St. Lucia						Vanuatu
St. Vincent and the Grenadines						Viet Nam

[a] Sub-Saharan Africa region is defined in the report as East and South Africa; West and Central Africa; Djibouti, Sudan, and South Sudan.

Appendix B. Questionnaires in English - Home Fortification Global Assessment 2011

Questionnaires are available in English, Spanish and French at the Home Fortification Technical Advisory Group website <www.hftag.gainhealth.org>. The following pages of appendix B below include screen shots of each of the 5 Excel worksheets of the English version of the questionnaire. Because the drop down menus cannot be displayed in the screen shots, a table with the possible drop down options for each question is included after the screen shots of the questionnaire.

Global Assessment of Home Fortification Interventions

GENERAL INFORMATION

Return this Excel Workbook by 13 JUNE 2011 to: hfa@unicef.org

Summary instructions on filling out the questionnaire:

Select one	Allows you to **select from a list of options**. Click on the cell with your mouse.
☑	Allows you to **mark your selection**. Click on the box with your mouse.
?	**Click for help.**

1. General Information:

A 1	Country		**Drop Down Menu**				
A 2	Date the questionnaire is completed (for example, DD-MMM-YYYY or 02-Jun-2011)		**Type your answer here**				
			Person 1	**Person 2**	**Person 3**	**Person 4**	**Person 5**
A 3	Name of person (s) completing this questionnaire	?	Type full name here	Type full name here	Type full name here	Type full name here	Type full name here
A 4	Position/title	?	Type here	Type here	Type here	Type here	Type here
A 5	Organization	?	Type here	Type here	Type here	Type here	Type here
A 6	E-mail address	?	Type here	Type here	Type here	Type here	Type here
A 7	Telephone number	?	Type here	Type here	Type here	Type here	Type here

2. National Policy and legislative framework

	National Policy Framework of Home Fortification	?	
A 8	Does your country have a national nutrition policy that includes home fortification?		**Select one**
A 9	If yes, under which of the following is home fortification included:		**Check all that apply**
A 9a	Food fortification strategy		☐
A 9b	Infant and Young Child Feeding strategy		☐

START HERE | MNP Questionnaire | LNS Questionnaire | CFS Questionnaire | Guidance notes

Global Assessment of Home Fortification Interventions
GENERAL INFORMATION

Return this Excel Workbook by 13 JUNE 2011 to: hfa@unicef.org

Summary instructions on filling out the questionnaire:

Select one	Allows you to **select from a list of options**. Click on the cell with your mouse.
☑	Allows you to **mark your selection**. Click on the box with your mouse.
?	**Click for help.**

1. General Information:

A 1	Country		**Drop Down Menu**				
A 2	Date the questionnaire is completed (for example, DD-MMM-YYYY or 02-Jun-2011)		**Type your answer here**				
			Person 1	**Person 2**	**Person 3**	**Person 4**	**Person 5**
A 3	Name of person (s) completing this questionnaire	?	Type full name here	Type full name here	Type full name here	Type full name here	Type full name here
A 4	Position/title	?	Type here	Type here	Type here	Type here	Type here
A 5	Organization	?	Type here	Type here	Type here	Type here	Type here
A 6	E-mail address	?	Type here	Type here	Type here	Type here	Type here
A 7	Telephone number	?	Type here	Type here	Type here	Type here	Type here

2. National Policy and legislative framework

	National Policy Framework of Home Fortification	?	
A 8	Does your country have a national nutrition policy that includes home fortification?		**Select one**
A 9	If yes, under which of the following is home fortification included:		**Check all that apply**
A 9a	Food fortification strategy		☐

A 9b	Infant and Young Child Feeding strategy	☐	
A 9c	Micronutrient deficiency prevention and control strategy	☐	
A 9d	Anaemia prevention and control programme	☐	
A 9e	Other	**Type your answer here**	
3. About your intervention			
<u>NOTE</u>: **The next set of questions will help you determine which questionnaire to answer.** **Only one questionnaire (individual Excel file) should be completed per each intervention. If an intervention is distributing more than one product, complete all relevant questionnaires.**			
	Micronutrient Powders (MNPs): **MNPs is a powdered preparation of vitamins and minerals packaged in single dose sachets used for the prevention of vitamin and mineral deficiencies.** **<u>Method of use</u>:** **1. Mixed into food that is ready to eat**		
A 10	Does your intervention **<u>currently</u>** distribute micronutrient powders (MNPs)?	**Select one**	If "**yes**" complete the **MNP questionnaire.**
A 11	Do you have **<u>multiple</u>** MNP interventions?	**Select one**	If "**yes**" complete **one MNP questionnaire per each intervention and per each target group**. <u>For example</u>: 1. In country X an NGO distributes MNPs to children 6-12 months and to school age children . In this case the NGO would fill out two MNP questionnaires, **<u>one for each age group</u>.** 2. In country X an organization provides MNPs to children 6-24 months in one region and to children 6-59 months in another region. In this case the organization would fill out two MNP questionnaire, **<u>one for each age group in each region</u>**. 3. In country X, NGO X operates one MNP intervention in one province and another NGO Z *independently* operates another MNP intervention in a different providence. Each NGO would complete a separate questionnaire, **<u>one for each intervention.</u>**
A 12	Does your intervention **<u>intend to start distributing</u>** MNPs in the next 12 months?	**Select one**	**<u>If "yes" or "already distributing"</u>** fill out the **MNP questionnaire.** **<u>If "no"</u>** or if you don't have an MNP intervention at this time **<u>do not</u> fill out the MNP questionnaire**.

A 13	**If you are not** planning an intervention, is there an **interest** in your country to start an MNP intervention in the future?	**Select one**	**Do not fill out the MNP questionnaire.**
A 14	If "yes", can you briefly explain why there is an interest in your country	**Type your answer here**	

Lipid-based Nutrient Supplements (LNS)

LNS is a paste preparation with high lipid content including macro and micronutrients. Products included in this questionnaire are Nutributter® and Plumpy'doz®.

Do not complete if your intervention uses Supplementary Plumpy® or Ready-to-UseTherapeutic Foods (RUTF)

Method of use:

1. Mixed into food that is ready to eat

2. Consumed directly

A 15	Does your intervention **currently** distribute LNS?	**Select one**	If **"yes"** complete the **LNS questionnaire**.
A 16	Do you have **multiple** LNS interventions?	**Select one**	If **"yes"** complete **one questionnaire per each intervention and per each target group** . For example: 1. In country X an NGO distributes LNS to children 6-12 months and to school age children . In this case the NGO would fill out two LNS questionnaires, **one for each age group**. 2. In country X an organization provides LNS to children 6-24 months in one region and to children 6-59 months in another region. In this case the organization would fill out two LNS questionnaires, **one for each age group in each region**. 3. In country X, NGO X operates one LNS intervention in one province and another NGO Z *independently* operates another LNS intervention in a different providence. Each NGO would complete a separate questionnaire, **one for each intervention.**
A 17	Does your intervention **intend to start distributing** LNS in the next 12 months?	**Select one**	**If "yes" or "already distributing"**, fill out the LNS questionnaire. **If "no"** or if you don't have an LNS intervention at this time **do not fill out the LNS questionnaire.**
A 18	If you are not planning an intervention, is there an **interest** in your country to start an LNS intervention in the future?	**Select one**	**Do not fill out the LNS questionnaire.**

A 19	If "yes", can you briefly explain why there is an interest in your country	Type your answer here	
	Complementary Food Supplements (CFS): **CFS is a powdered preparation with essential fats, protein and/or specific amino acids, enzymes, and micronutrients used for the prevention of vitamin and mineral deficiencies.** **Method of use:** **1. Mixed into food that is ready to eat** **2. Mixed with liquids**		
A 20	Does your intervention **currently** distribute CFS?	**Select one**	If **"yes"** complete the **CFS questionnaire.**
A 21	Do you have **multiple** CFS interventions?	**Select one**	If **"yes"** complete **one questionnaire per each intervention and per each target group**. For example: 1. In country X an NGO distributes CFS to children 6-12 months and to school age children . In this case the NGO would fill out two CFS questionnaires, **one for each age group**. 2. In country X an organization provides CFS to children 6-24 months in one region and to children 6-59 months in another region. In this case the organization would fill out two CFS questionnaires, **one for each age group in each region**. 3. In country X, NGO X operates one CFS intervention in one province and another NGO Z *independently* operates another CFS intervention in a different providence. Each NGO would complete a separate questionnaire, **one for each intervention**.
A 22	Does your intervention **intend to start distributing** CFS in the next 12 months?	**Select one**	**If "yes" or already distributing**, fill out the **CFS questionnaire.** **If "no",** or if you don't have an CFS intervention at this time, **do not fill out the CFS questionnaire**.
A 23	If you are not planning an intervention, is there an **interest** in your country to start an CFS intervention in the future?	**Select one**	**Do not fill out the CFS questionnaire.**
	If "yes", can you briefly explain why there is an interest in your country	Type your answer here	

MNPs is a powdered preparation of vitamins and minerals packaged in single dose sachets used for the prevention of vitamin and mineral deficiencies.

Method of use:

1. Mixed into food that is ready to eat

Complete one MNP questionnaire (excel sheet) per each intervention AND per each target group

Summary instructions on filling out the questionnaire:

Select one	Click on the cell to **select** from a list of options.
	Click on the box to to **mark** your selection.
?	**Click for help.**

1. General information			
	General information about the MNP intervention		
B 1	What is the full name or title given to your intervention ?	**Type your answer here**	
	MNP Intervention objective		
B 2	What is the general objective of the intervention?	**Check all that apply**	
B 2a	Micronutrient deficiency prevention and control	☐	
B 2b	Reduction of stunting	☐	
B 2c	Anaemia prevention and control	☐	

B 2d	Improved complementary feeding	☐	
B 2e	Other (If you dont know, say "don't know")	**Type your answer here**	
B 3	What is the expected outcome of the intervention (for example, reduce anemia in 6-24 months by 15%)	**Type your answer here**	
B 4	Indicate the approach that best describes your intervention ?	**Select one**	**If "free/ public distribution", skip to question B 5**
B 4a	If "other", please describe	**Type your answer here**	
B 4b	If paid for by participants, is the cost of sachets subsidized?	**Select one**	
B 4c	If paid for by participants, how much are participants asked to pay for each sachet? (please list the cost in local currency and in US dollar cents)	**Type your answer here**	
B 5	Is your intervention a stand alone activity or is it integrated in a multi-sectoral approach?	**Select one**	
	If integrated, what kind of programme is the MNP intervention part of? ?	**Check all that apply**	
B 5a	Infant and Young Child Feeding Programme	☐	
B 5b	Micronutrient deficiency prevention and control programme	☐	
B 5c	Anaemia prevention and control programme	☐	
B 5d	Humanitarian response programme	☐	
B 5e	School Feeding programme	☐	
B 5f	Other (If you dont know, say "don't know")	**Type your answer here**	
	Management & structure of the MNP intervention		
B 6	List the names of the organizations involved in the intervention ?	**Type your answer here**	
B 7	Where is the funding for this intervention coming from?	**Type your answer here**	

B 8	When did the intervention start distributing MNPs? (for example, MONTH-YR or JUNE-10; if you don't know, say "don't know")	**Type your answer here**	**If the intervention has not started please list the expected starting date of distribution.**
B 9	What is the scale of the intervention right now?	**Select one**	**Remember to fill out this questionnaire based on the current status of your intervention.**
B 9a	If "other", describe	**Type your answer here**	
B 10	What is the planned final scale of the intervention? ?	**Select one**	
B10a	If "other", describe	**Type your answer here**	
B 11	What age group does your intervention target? ?	**Select one**	**If more than one age group, fill out a separate MNP questionnaire per age group.**
B 11a	If "other", specify	**Type your answer here**	
B 12	What number of participants did the intervetion reach in 2010? (if you don't know, say "don't know")	**Type your answer here**	
B 13	What number of participants do you expect to reach in 2011? (If you don't know say "don't know")	**Type your answer here**	

2. MNP Formulation, registration & approval

MNP formulation

B 14	List the quantity of each nutrient in each MNP sachet. ?	**Micronutrient**		**Amount**	**If the intervention has not started yet and the formulation has not been defined, skip to B17.**
B14a		Vitamin A (µg RE)			
B 14b		Vitamin C (mg)			
B 14c		Vitamin D (µg)			
B 14d		Vitamin E (mg a-TE)			
B14e		Thiamine/Vitamin B1 (mg)			
B 14f		Riboflavin/Vitamin B2 (mg)			
B 14g		Vitamin B6 (mg)			
B 14h		Vitamin B12 (µg)			
B 14i		Folic Acid (µg)			
B 14j		Niacin/Vitamin B3 (mg)			

B 14k		Iron (mg)		
B 14l		Zinc (mg)		
B 14m		Copper (mg)		
B 14n		Iodine (µg)		
B 14o		Selenium (µg)		
B 14p		**List additional nutrients here**		
B 14q		**List additional nutrients here**		
B 15	Specify the iron compound in the MNP	**Select one**		
B 15a	If "other", please describe	**Type your anwer here**		
B 16	If the MNP formulation is different from the standard formulation, as per WHO/WFP/UNICEF joint statement, explain the reason why a different formulation is used (if you don't know, say "don't know")	**Type your answer here**	http://www.who.int/nutrition/publications/WHO_WFP_UNICEFstatement.pdf	
	Registration and approval			
B 17	Is the MNP a registered product in the country?	**Select one**	**If "no", skip to Section 3 (Production, supply and procurement information)**	
B 18	If yes, how has the MNP been registered?	**Select one**		
B 18a	If "other", describe	**Type your answer here**		
B 19	Does the MNP have government approval? (for example, ethical clearance, proof of safety, standard established)	**Select one**		
b 19a	If "no", explain why	**Type your answer here**		
3. Production, supply and procurement information				
	Procurement			
B 20	Who procures the MNP? **?**	**Select one**		
B 20a	If "other", specify	**Type your answer here**		
	Manufacturing			

B 21	Is the product partly, or entirely, locally manufactured? ?	Select one	
B 22	Who is your product manufacturer ? (If you don't know, say "don't know") ?	Type your answer here	
B 22a	If you receive, or have received, product from more than one manufacturer, specify ?	Type your answere here	
B 23	Is the product protected by a patent or any other legal instrument? ?	Select one	
	Quality assurance		
B 24	Is there a protocol to check the quality of the MNPs?	Select one	
B 24a	If "yes", describe briefly	Type your answer here	
B 25	Have any problems been experienced with the quality of the MNPs at any time? ?	Select one	
B 25a	If "yes", explain the problem experienced	Type your answer here	
4. Distribution			
	Packaging		
B 26	How is the product packaged for distribution?	Select one	
B 26a	If "other", please describe	Type your answer here	
B 26b	What is the number of units per package (box, bag)? (if no packaging, say "no packaging")	Type your answer here	
B 27	Does the MNP have a local name? ?	Select one	
B 27a	If "yes" , write the local MNP name	Type your answer here	
B 27b	If applicable, what is the translation of the local MNP name into English/French/Spanish	Type your answer here	
B 28	Was a local image developed for the MNP?	Select one	
B 28a	If "yes", please indicate where the local image is displayed	Select one	

B 29	State all the messages written on the **sachet**, including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	**Attach pictures of both sides of the sachet**
B 30	State all the messages written on the **box or bag** (containing the sachets), including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	**Attach pictures of all sides of the box or bag**
	Distribution strategy		
B 31	How are MNPs distributed to participants?		
	Through:	**Check all that apply**	
B 31a	Health facilities	☐	
B 31b	Scheduled events (child health days, immunization campaigns, outreach, etc.)	☐	
B 31c	Community based (group or house visits, community events, etc.)	☐	
B 31d	Private sector (shops, pharmacies/ drug stores, etc.)	☐	
B 31e	General food distribution	☐	
B 31f	Other	**Type your answer here**	
B 32	What is the frequency of distribution of MNPs to participants? ?	**Select one**	
B 32a	If "other", specify	**Type your answer here**	
B 33	How many sachets are given to each participant at each distribution? ?	**Type your answer here**	
B 34	What is the recommended consumption schedule? ?	**Select one**	
B 34a	If "other", describe	**Type your answer here**	

5. Communication and Social Marketing

Communication strategies

B 35	Is there a Behavior Change Communication strategy in place? ?	**Select one**	**If "no" skip to Section 6 (Monitoring & Evaluation). If under development fill out as best you can**
	If "yes", which of the following Behavior Change Communication channels and formats are currently being implemented?		
	Mass media	**Check all that apply**	
B 35a	Billboards	☐	
B 35b	Radio spots	☐	
B 35c	TV spots	☐	
B 35d	SMS/Text messages ?	☐	
B 35e	Other mass media	☐	
B 35f	If other, describe	**Type your answer here**	
	Interpersonal communication	**Check all that apply**	
B 35g	Group meetings/counseling	☐	
B 35h	Individual meetings/counseling	☐	
B 35i	Other communication materials	☐	
B 35j	If other, describe	**Type your answer here**	
	Other communication materials	**Check all that apply**	
B 35k	MNP box/bag	☐	
B 35l	Informational brochures/leaflets	☐	
B 35m	Other communication materials	☐	
B 35n	If other, describe	**Type your answer here**	

B 36	Who delivers the Behavior Change Communication strategies?	**Check all that apply**	
B 36a	Government personnel	☐	
B 36b	NGO personnel	☐	
B 36c	Community health workers	☐	
B 36d	Others	☐	
B 36e	If "others", describe	**Type your answer here**	
B 37	What type of training is currently directed at MNP providers and distributors?	**Check all that apply**	
B 37a	Group orientation/training	☐	
B 37b	Individual orientation/training	☐	
B 37c	Written or electronic information about MNPs distributed	☐	
B 37d	Other training or Behavior Change Communication strategies	☐	
B 37e	If other, describe	**Type your answer here**	
B 38	Describe the messages given to caregivers and providers on how to use MNPs (you may copy and paste from planning documents if convenient) ?	**Type your answer here**	**If several messages are given, you can attach a separate document to describe them**
B 39	Describe the main message given on the reason to give MNPs	**Type your answer here**	**If several messages are given, you can attach a separate document to describe them**
B 40	Indicate additional messages on the reason for giving MNPs	**Check all that apply**	
B 40a	Stronger/more active	☐	
B 40b	Healthier/ less sick	☐	

B 40c	Increased appetite	☐	
B 40d	Increased weight gain	☐	
B 40e	Develop better/ grow better	☐	
B 40f	Prevent anemia	☐	
B 40g	Make child more intelligent	☐	
B 40h	Other messages	☐	
B 40i	If yes to "other messages", describe	**Type your answer here**	
6. Monitoring and Evaluation			
B 41	Is there a monitoring and evaluation plan?	**Select one**	
B 42	Is monitoring information collected on procurement of MNPs?	**Select one**	
B 43	Is monitoring information collected on MNP supplies?	**Select one**	
B 44	Is monitoring information collected on training of MNP providers and distributers?	**Select one**	
B 45	Is monitoring information collected on Behavior Change Communication?	**Select one**	
B 46	Is monitoring information collected on MNP coverage?	**Select one**	
B 47	Is monitoring information collected on appropriate use of MNPs?	**Select one**	
B 48	Are impact evaluations conducted?	**Select one**	
	If "yes", specify on which indicators	**Check all that apply**	
B 48a	Anemia status	☐	
B 48b	Iron status	☐	
B 48c	Feeding practices and behaviours	☐	
B 48d	Others	**Type your answer here**	
B 49	Is there a strategy for dealing with reports of adverse effects associated to MNPs? ?	**Select one**	

B 49a	If "yes", describe	**Type your answer here**	
7. Coordination and Ownership			
B 50	Is there a coordinating body that oversees the development/ implementation of this intervention?	**Select one**	
B 51	Have you shared information about the MNP intervention with those that are not directly involved in it's implementation?	**Select one**	**If "no", skip to Section 8 (Main challenges to implementation)**
	If "yes", indicate with who:	**Check all that apply**	
B 51a	Media	☐	
B 51b	General Public	☐	
B 51c	Health Authorities	☐	
B 51d	Consumer groups	☐	
B 51e	Others (specify)	**Type your answer here**	
8. Main Challenges to implementation			
B 52	**Mark the top three challenges confronted by the intervention:**	**Check up to three**	
	Technical		
B 52a	Technical assistance/ programme support	☐	
B 52b	Programme design	☐	
B 52c	Monitoring and evaluation	☐	
B 52d	Training	☐	
	Programme management/implementation		
B 52e	Procurement	☐	

	Acceptability by:		
B 52f	Government	☐	
B 52g	Health community	☐	
B 52h	Academia	☐	
B 52i	Intervention partcipants	☐	
B 52j	Others	☐	
	If "other" challenges, please speficy	**Type your answer here**	
B 52k	Funding for product	☐	
B 52l	Funding for delivery	☐	
B 52m	Coordination	☐	
B 52n	Adherence/ compliance (use of products by intended participants)	☐	
B 52o	Other challenges	☐	
B 52p	If "other" challenges, please speficy	**Type your answer here**	

9. Describe lessons learned or experiences that you think would be useful for others to know (type your description in the space below)

10. Describe additional documents attached (type your description in the space below)

Note: Include documents such as intervention protocols or descriptions, national strategies/policies, pictures of sachets and boxes, communications materials, press releases, etc.

1 **Include a picture of the sachet (please include)**
2 **Include a picture of the box or bag or other packaging (please include)**
3
4
5
6
7
8
9
10

Global Assessment of Home Fortification Interventions

Lipid-based Nutrient Supplements

LNS is a paste preparation with high lipid content including macro and micronutrients. Products included in this questionnaire are Nutributter® and Plumpy'doz®.

Do not complete ***for interventions using Supplementary Plumpy ® or Ready-to-Use Therapeutic Foods (RUTF).***

Method of use:

1. **Mixed into food that is ready to eat**
2. **Consumed directly**

Complete one LNS questionnaire (excel sheet) per each intervention AND per each target group

Summary instructions on filling out the questionnaire:

Select one	Click on the cell to **select** from a list of options.
	Click on the box to to **mark** your selection.
	Click for help.

1. General Information

	General information about the LNS intervention			
C 1	What is the full name or title given to your intervention	?	**Type your answer here**	
	LNS intervention objective			
C 2	What is the general objective of the intervention?		**Check all that apply**	
C 2a	Improved complementary feeding		☐	
C 2b	Reduction of stunting		☐	
C 2c	Micronutrient deficiency prevention and control		☐	
C 2d	Anaemia prevention and control		☐	

C 2e	Prevention/ treatment of Moderate Acute Malnutrition (MAM)	☐	
C 2f	Other (If you don't know, say "don't know")	**Type your answer here**	
C 3	What is the expected outcome of the intervention? (for example, reduce anemia in 6-24 months by 15%)	**Type your answer here**	
	LNS intervention description		
C 4	Indicate the approach that best describes your interventioi ?	**Select one**	If "free/public distribution", skip to question C 5
C 4a	If "other", specify	**Type your answer here**	
C 4b	If paid for by participants, is the cost of sachets subsidized?	**Select one**	
C 4c	If paid for by participants, how much are participants asked to pay for each sachet? (please list the cost in local currency and US dollar cents)	**Type your answer here**	
C 5	Is your intervention a stand alone activity or is it integrated in a multi-sectoral approach?	**Select one**	
	If integrated, what kind of programme is the LNS intervention part of? ?	**Check all that apply**	
C 5a	Reduction of stunting	☐	
C 5b	Infant and Young Child Feeding	☐	
C 5c	Micronutrient deficiency prevention and control	☐	
C 5d	Anaemia prevention and control	☐	
C 5e	Humanitarian response programme	☐	
C 5f	Prevention/ treatment of Moderate Acute Malnutrition (MAM)	☐	
C 5g	School feeding program	☐	
C 5h	Other (If you don't know, say "don't know")	**Type your answer here**	

	Management & structure of the LNS intervention		
C 6	List the names of the organizations involved in the intervention ?	Type your answer here	
C 7	Where is the funding for this intervention coming from?	Type your answer here	
C 8	When did the intervention start distributing LNS? (for example, MONTH-YR or JUNE-10; if you don't know, say "don't know)	Type your answer here	If the intervention has not started please list the expected starting date of distribution.
C 9	What is the scale of the intervention right now?	Select one	Remember to fill out this questionnaire based on the current status of your intervention.
C 9a	If "other", describe	Type your answer here	
C 10	What is the planned final scale of the intervention? ?	Select one	
C 10a	If "other", describe	Type your answer here	
C 11	What age group does your intervention target? ?	Select one	If more than one age group, fill out a separate questionnaire per age group
C 11a	If "other", specify	Type your answer here	
C 12	What number of participants did the intervetion reach in 2010? (if you don't know, say "don't know")	Type your answer here	
C 13	What number of participants do you expect to reach in 2011? (If you don't know say "don't know")	Type your answer here	

2. LNS Formulation, Registration & Approval

	LNS formulation				
C 14	Detail the quantity of each nutrient in each sachet ?	Micronutrient		Amount	If your intervention has not started and the formulation has not been defined, skip to C15
C 14a		Protein (g)			
C 14b		Fat (g)			
C 14c		Linolenic acid			
C 14d		Alpha-linolenic acid			
C 14e		Carbohydrate (g)			
C 14f		Energy (kcal)			

C 14g		Vitamin A (µg RE)	
C 14h		Vitamin C (mg)	
C 14i		Vitamin D (µg)	
C 14j		Vitamin E (mg a-TE)	
C 14k		Thiamine/ Vitamin B1 (mg)	
C 14l		Riboflavin/ Vitamin B2 (mg)	
C 14m		Niacin/Vitamin B3 (mg)	
C 14n		Vitamin B6 (mg)	
C 14o		Vitamin B12 (µg)	
C 14p		Panthothenic acid	
C 14q		Folic Acid (µg)	
C 14r		Iron (mg)	
C 14s		Zinc (mg)	
C 14t		Copper (mg)	
C 14u		Calcium (mg)	
C 14v		Selenium (µg)	
C 14w		Iodine (µg)	
C 14y		**List additional nutrients here**	
C 14z		**List additional nutrients here**	
C 14za		**List additional nutrients here**	
C 15	Specify the iron compound in the LNS	**Select one**	
	If "other", please describe	**Type your anwer here**	
	Registration and approval		
C 16	Is the LNS a registered product in the country?	**Select one**	**If "no" skip to Section 3 (Production, supply and procurement information)**
C 17	If yes, how has the LNS been registered?	**Select one**	
C 17a	If "other", describe	**Type your answer here**	
C 18	Does the LNS have government approval? (for example, ethical clearance, proof of safety, standard established)	**Select one**	
C 18a	If "no", explain why	**Type your answer here**	

3. Production, Supply and Procurement Information				
	Procurement			
C 19	Who procures the LNS?		**Select one**	
C 19a	If other, specify		**Type your answer here**	
	Manufacturing			
C 20	Is the product partly, or entirely, locally manufactured?	?	**Select one**	
C 21	Who is your product manufacturer ? (If you don't know, say "don't know")	?	**Type your answer here**	
C 21a	If you receive or have received product from more than one manufacturer, specify	?	**Type your answer here**	
C 22	Is the product protected by a patent or any other legal instrument?	?	**Select one**	
	Quality assurance			
C 23	Is there a protocol to check the quality of the LNS?		**Select one**	
C 24	Have any problems been experienced with the quality of the LNS at any time?	?	**Select one**	
C 24a	If "yes", explain the problem experienced		**Type your answer here**	
4. Distribution				
	Packaging			
C 25	How is the product packaged for distribution?		**Select one**	
C 25a	If "other", please describe		**Type your answer here**	
C 25b	What type of individual unit package is used (pot, sachet, other)?		**Type your answer here**	
C 25c	What is the number of units per package (box, bag) for distribution? (if no packaging, say "no packaging")		**Type your answer here**	**If both, a pot and sachet are used, complete one questionnaire for both**

C 25d	What is the quantity of the product (in grams) in each individual unit?	**Type your answer here**	
C 26	Does the LNS have a local name? ?	**Select one**	
C 26a	If "yes", write the local LNS name	**Type your answer here**	
C 26b	If applicable, what is the translation of the local LNS name into English/French/Spanish	**Type your answer here**	
C 26c	If applicable, what is the name of the product internationally? (for example, Nutributter® and Plumpy'doz®)	**Type your answer here**	
C 27	Was a local image developed for the LNS?	**Select one**	
C 27a	If "yes", please indicate where the local image is displayed	**Bag/box**	
C 28	State all the messages written on the **sachet**, including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	**Attach pictures of both sides of the sachet**
C 29	State all the messages written on the **box or bag** (containing the sachets), including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	**Attach pictures of all sides of the box or bag**
	Distribution strategy		
C 30	How is LNS distributed to participants?		
	Through:	**Check all that apply**	
C 30a	Health facilities	☐	
C 30b	Scheduled events (child health days, immunization campaigns, outreach, etc.)	☐	
C 30c	Community based (group or house visits, community events, etc.)	☐	
C 30d	Private sector (shops, pharmacies/ drug stores, etc.)	☐	
C 30e	General food distribution	☐	
C 30f	Other	**Type your answer here**	
C 31	What is the frequency of distribution of LNS to participants? ?	**Select one**	
C 32	How many pots/sachets are given to each participant at each distribution? ?	**Type your answer here**	
C 33	What is the recommended consumption schedule? ?	**Type your answer here**	

5. Communication and Social Marketing

	Communication strategies		
C 34	Is there a Behavior Change Communication strategy in place? ?	Select one	If "no" skip to Section 6 (Monitoring & Evaluation). If under development fill out as best you can
	If "yes", which of the following Behavior Change Communication channels and formats are currently being implemented?		
	Mass media	**Check all that apply**	
C 34a	Billboards	☐	
C 34b	Radio spots	☐	
C 34c	TV spots	☐	
C 34d	SMS/Text messages ?	☐	
C 34e	Other mass media	☐	
C 34f	If other, describe	**Type your answer here**	
	Interpersonal communication	**Check all that apply**	
C 34g	Group meetings/counseling	☐	
C 34h	Individual meetings/counseling	☐	
C 34i	Other communication manterials	☐	
C 34j	If other, describe	**Type your answer here**	
	Other communication materials	**Check all that apply**	
C 34k	LNS box	☐	
C 34l	Informational brochures/leaflets	☐	
C 34m	Other communication materials	☐	
C 34n	If other, describe	**Type your answer here**	
	Who delivers the interpersonal communication strategies implemented with participants?	**Check all that apply**	

C 34o	Government personnel	☐	
C 34p	NGO personnel	☐	
C 34q	Community health workers	☐	
C 34r	Others	☐	
C 34s	If "others", describe	**Type your answer here**	
C 35	What type of training is currently directed at LNS providers and distributors?	**Check all that apply**	
C 35a	Group orientation/training	☐	
C 35b	Individual orientation/training	☐	
C 35c	Written or electronic information about LNS distributed	☐	
C 35d	Other training or Behavior Change Communication strategies	☐	
C 35e	If other, describe	**Type your answer here**	
C 36	Describe the messages given to caregiver and providers on how to use LNS (you may copy and paste from planning documents if convenient) ?	**Type your answer here**	**If several messages are given, you can attach a separate document to describe them**
C 37	Describe the main message given on the reason for giving LNS	**Type your answer here**	**If several messages are given, you can attach a separate document to describe them**
C38	Indicate additional messages given on the reason for giving LNS	**Check all that apply**	
C 38a	Stronger/more active	☐	
C 38b	Healthier/ less sick	☐	
C 38c	Increased appetite	☐	
C 38d	Increased weight gain	☐	
C 38e	Develop better/ grow better	☐	
C 38f	Prevent anemia	☐	
C 38g	Make child more intelligent	☐	

C 38h	Other messages	☐	
C 38i	If yes to "other messages", describe	**Type your answer here**	
6. Monitoring and Evaluation			
C 39	Is there a monitoring and evaluation plan?	**Select one**	
C 40	Is monitoring information collected on procurement of the LNS?	**Select one**	
C 41	Is monitoring information collected on LNS supplies?	**Select one**	
C 42	Is monitoring information collected on training of LNS providers and distributers?	**Select one**	
C 43	Is monitoring information collected on Behavior Change Communication?	**Select one**	
C 44	Is monitoring information collected on LNS coverage?	**Select one**	
C 45	Is monitoring information collected on appropriate use of LNS?	**Select one**	
C 46	Are impact evaluations conducted?	**Select one**	
	If "yes", specify on which indicators	**Check all that apply**	
C 46a	Anemia status	☐	
C 46b	Iron status	☐	
C 46c	Feeding practices and behavious	☐	
C 46d	Growth	☐	
C 4e	Others	**Type your answer here**	
C 47	Is there a strategy for dealing with reports of adverse effects associated to LNS? ?	**Select one**	
C 47a	If "yes", please describe	**Type your answer here**	
7. Coordination and Ownership			
C 49	Is there a coordinating body that oversees the development/ implementation of this intervention?	**Select one**	
C 50	Have you shared information about the LNS intervention with those that are not directly involved in it's implementation?	**Select one**	

	If "yes", indicate with who:	**Check all that apply**	
C 50a	Media	☐	
C 50b	General Public	☐	
C 50c	Health Authorities	☐	
C 50d	Consumer groups	☐	
C 50e	**Others (specify)**	**Type your answer here**	
8. Main Challenges to implementation			
C 51	**Mark the top three challenges confronted by the intervention:**	**Check up to three**	
	Technical		
C 51a	Technical assistance/ programme support	☐	
C51b	Programme design	☐	
C 51c	Monitoring and evaluation	☐	
C 51d	Training	☐	
	Programme management/implementation		
C 51d	Procurement	☐	
	Acceptability by:		
C 51 e	Government	☐	
C 51f	Health community	☐	
C 51g	Academia	☐	
C 51h	Intervention partcipants	☐	
C 51i	Others	☐	
C51j	If "other" challenges, please speficy	**Type your answer here**	
C 51k	Funding for product	☐	
C 51l	Funding for delivery	☐	
C 51m	Coordination	☐	
C 51n	Adherence/ compliance (use of products by intended participants)	☐	

C 51o	Other challenges	☐	
C 51p	If "other" challenges, please speficy	**Type your answer here**	

9. Describe lessons learned or experiences that you think would be useful for others to know (type your description in the space below)

10. Describe any additional documents attached to supplement your description (type your description in the space below)

Note: Include documents such as intervention protocols or descriptions, national strategies/policies, pictures of sachets and boxes, communications materials, press releases, etc.

1 **Include a picture of the sachet/pot/ other (please include)**

2 **Include a picture of the box or bag or other packaging (please include)**

3
4
5
6
7
8
9
10

Global Assessment of Home Fortification Interventions

Complementary Food Supplements (CFS)

CFS is a powdered preparation with essential fats, protein and/or specific amino acids, enzymes, and micronutrients used for the prevention of vitamin and mineral deficiencies.

Method of use:

1. **Mixed into food that is ready to eat**
2. **Mixed with liquids**

Complete one CFS questionnaire (excel sheet) per each intervention AND per each target group

Summary instructions on filling out the questionnaire:

Select one	Click on the cell to **select** from a list of options.
	Click on the box to to **mark** your selection.
	Click for help.

1. General Information

	General information about the CFS intervention		
D 1	What is the full name or title given to your intervention ?	**Type your answer here**	
	CFS intervention objective		
D 2	What is the general objective of the intervention?	**Check all that apply**	
D 2a	Micronutrient deficiency prevention and control	☐	
D 2b	Reduction of stunting	☐	
D 2c	Anaemia prevention and control	☐	
D 2d	Improved complementary feeding	☐	
D 2e	Other (If you don't know, say "don't know")	**Type your answer here**	
	CFS intervention description		

D 3	What is the expected outcome of the intervention? (for example, reduce anemia in 6-24 months by 15%)	Type your answer here	
D 4	Indicate the approach that best describes your intervention ?	Select one	If "free/public distribution", skip to question B 5
D 4a	If "other", specify	Type your answer here	
D 4b	If paid for by participants, is the cost of saches subsidized?	Select one	
D 4c	If paid for by participants, how much are participants asked to pay for each sachet? (please list the cost in local currency and US dollar cents)	Type your answer here	
D 5	Is your intervention a stand alone activity or is it integrated in a multi-sectoral approach?	Select one	
D 5	If integrated, what kind of programme is the CFS intervention part of? ?	Check all that apply	
D 5a	Infant and Young Child Feeding Programme	☐	
D 5b	Micronutrient deficiency prevention and control programme	☐	
D 5c	Anaemia prevention and control programme	☐	
D 5d	Humanitarian response programme	☐	
D 5e	Other (If you don't know, say "don't know")	Type your answer here	
	Management and structure of the intervention		
D 6	List the names of the organizations involved in the intervention ?	Type your answer here	
D 7	Where is the funding for this intervention coming from?	Type your answer here	
D 8	When did the intervention start distributing CFS? (for example, MONTH-YR or JUNE-10; if you don't know, say "don't know)	Type your answer here	If the intervention has not started please list the expected starting date of distribution.

D 9	What is the scale of the intervention right know?	Select one	Remember to fill out this questionnaire based on the current status of your intervention.
D 9a	If "other", describe	Type your answer here	
D 10	What is the planned final scale of the intervention? ?	Select one	
D 10a	If "other", describe	Type your answer here	
D 11	What age group does your intervention target? ?	Select one	If more than one age group, fill out a separate questionnaire per age group
D 11a	If "other", specify	Type your answer here	
D 12	What number of participants did the intervetion reach in 2010? (if you don't know, say "don't know")	Type your answer here	
D 13	What number of participants do you expect to reach in 2011? (If you don't know say "don't know")	Type your answer here	

2. CFS Formulation, Registration & Approval

CFS formulation

D 14	List the quantity of each nutrient in each CFS sachet ?	**Micronutrient**	**Amount**	If your intervention has not started and the formulation has not been defined, skip to D15
D 14a		Protein (g)		
D 14b		Iron (mg)		
D 14c		Zinc (mg)		
D 14d		Calcium (mg)		
D 14e		Vitamin A (μg RE)		
D 14f		Vitamin D (μg)		
D 14g		Thiamine/ Vitamin B1 (mg)		
D 14h		Riboflavin/ Vitamin B2 (mg)		
D 14i		Vitamin B12 (μg)		
D 14j		Folic Acid (μg)		
D 14k		Vitamin C (mg)		

D 14l		**List additional nutrients here**		
D 14m		**List additional nutrients here**		
D 14n		**List additional nutrients here**		
D 15	Specify the iron compound in the CFS	**Select one**		
D 15a	If "other", please describe	**Type your anwer here**		
	Registration & Approval			
D 16	Is the CFS a registered product in the country?	**Select one**	**If "no" skip to Section 3 (Production, supply and procurement information)**	
D 17	If yes, how has the CFS been registered?	**Select one**		
D 17a	If "other", describe	**Type your answer here**		
D 18	Does the CFS have government approval? (for example. ethical clearance, proof of safety, standard established)	**Select one**		
D 18a	If "no", explain why	**Type your answer here**		
3. Production, Supply and Procurement Information				
	Procurement & supply			
D 19	Who procures the CFS? ?	**Select one**		
D 19a	If "other", specify	**Type your answer here**		
	Manufacturing			
D 20	Is the product partly, or entirely, locally manufactured? ?	**Select one**		
D 21	Who is your product manufacturer ? (If you don't know, say "don't know") ?	**Type your answer here**		
D 21a	If you receive, or have received, product from more than one manufacturer, specify ?	**Type your answere here**		
D 22	Is the product protected by a patent or any other legal instrument? ?	**Select one**		
	Quality assurance			
D 23	Is there a protocol to check the quality of the CFS?	**Select one**		
D 24	Have any problems been experienced with the quality of the CFS at any time? ?	**Select one**		
D 24a	If "yes", explain the problem experienced	**Type your answer here**		

4. Distribution			
	Packaging		
D 25	How is the product packaged for distribution?	**Select one**	
D 25a	If "other", describe	**Type your answer here**	
D 25b	What type of individual unit package is used (Sachet, Other)?	**Type your answer here**	
D 25c	What is the number of units per package (box, bag) for distribution? (if no packaging, say "no packaging")	**Type your answer here**	**Attach pictures of all sides of the box or bag**
D 26	Does the CFS product have a local name? **?**	**Select one**	
D 26a	If "yes" , write the local CFS name	**Type your answer here**	
D 26b	If applicable, what is the translation of the local CFS name into English/French/Spanish	**Type your answer here**	
D 27	Was a local image developed for the CFS?	**Select one**	**Attach pictures of both sides of the sachet**
D 27a	If "yes", please indicate where the local image is displayed	**Select one**	
D 28	State all the messages written on the **sachet**, including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	
D 29	State all the messages written on the **box or bag** (containing the sachets), including instructions on storage and recommended frequency of use if applicable. If no messages, say "no messages".	**Type your answer here**	
	Distribution strategy		
D 30	How is CFS distributed to participants?		
	Through:	**Check all that apply**	
D 30a	Health facilities	☐	
D 30b	Scheduled events (child health days, immunization campaigns, outreach, etc.)	☐	
D 30c	Community based (group or house visits, community events, etc.)	☐	

D 30d	Private sector (shops, pharmacies/ drug stores, etc.)	☐	
D 30e	General food distribution	☐	
D 30f	Other	**Type your answer here**	
D 31	What is the frequency of distribution of the CFS to participants? ?	**Select one**	
D 32	How many sachets are given to each participant at each distribution? ?	**Type your answer here**	
D 32a	If "other", specify	**Type your answer here**	
D 33	What is the recommended consumption schedule? ?	**Select one**	
D 33a	If "other", describe	**Type your answer here**	
5. Communication and Social Marketing			
	Communication strategies		
D 34	Is there a Behavior Change Communication strategy in place? ?	**Select one**	**If "no" skip to Section 6 (Monitoring & Evaluation). If under development fill out as best you can**
	If "yes", which of the following Behavior Change Communication channels and formats are currently being implemented?		
	Mass media	**Check all that apply**	
D 34a	Billboards	☐	
D 34b	Radio spots	☐	
D 34c	TV spots	☐	
D 34d	SMS/Text messages ?	☐	
D 34e	Billboards	☐	
D 34f	If other, describe	**Type your answer here**	
	Interpersonal communication	**Check all that apply**	
D 34g	Group meetings/counseling	☐	
D 34h	Individual meetings/counseling	☐	

D 34i	Other communication materials	☐	
D 34j	If other, describe	**Type your answer here**	
	Other communication materials	**Check all that apply**	
D 34k	CFS box/bag	☐	
D 34l	Informational brochures/leaflets	☐	
D 34m	Other communication materials	☐	
D 34n	If other, describe	☐	
D 35	Who delivers the interpersonal communication strategies implemented with participants?	**Check all that apply**	
D 35a	Government personnel	☐	
D 35b	NGO personnel	☐	
D 35c	Community health workers	☐	
D 35d	Others	☐	
D 35f	If "others", describe	**Type your answer here**	
D 36	What type of training is currently directed at CFS providers and distributors?	**Check all that apply**	
D 36a	Group orientation/training	☐	
D 36b	Individual orientation/training	☐	
D 36c	Written or electronic information about CFSs distributed	☐	
D 36d	Other training or Behavior Change Communication strategies	☐	
D 36e	If other, describe	**Type your answer here**	

D 37	Describe the messages given to caregivers and providers on how to use CFS (you may copy and paste from planning documents if convenient) ?	**Type your answer here**	
D 38	Describe the main message given to caregivers on the reason to give CFS	**Type your answer here**	
D 39	Indicate additional messages given to caregivers on the reason for giving CFS	**Check all that apply**	
D 39a	Stronger/more active	☐	
D 39b	Healthier/ less sick	☐	
D 39c	Increased appetite	☐	
D 39d	Increased weight gain	☐	
D 39e	Develop better/ grow better	☐	
D 39f	Prevent anemia	☐	
D 39g	Make child more intelligent	☐	
D 39h	Other messages	☐	
D 39i	If yes to "other messages", describe	**Type your answer here**	
6. Monitoring and Evaluation			
D 40	Is there a monitoring and evaluation plan?	**Select one**	
D 41	Is monitoring information collected on procurement of CFSs?	**Select one**	
D 42	Is monitoring information collected on CFS supplies?	**Select one**	
D 43	Is monitoring information collected on training of CFS providers and distributers?	**Select one**	
D 44	Is monitoring information collected on Behavior Change Communication?	**Select one**	
D 45	Is monitoring information collected on CFS coverage?	**Select one**	
D 46	Is monitoring information collected on appropriate use of CFS?	**Select one**	

D 47	Are impact evaluations conducted?	**Select one**	
	If yes, specify on which indicators	**Check all that apply**	
D 47a	Anemia status	☐	
D 47b	Iron status	☐	
D 47c	Feeding practices and behavious	☐	
D 47d	Others	**Type your answer here**	
D 48	Is there a strategy for dealing with reports of adverse effects associated to CFSs? ?	**Select one**	
D 48a	If "yes", describe	**Type your answer here**	
7. Coordination and Ownership			
D 49	Is there a coordinating body that oversees the development/ implementation of this intervention?	**Select one**	
D 50	Have you shared information about the CFS intervention with those that are not directly involved in it's implementation?	**Select one**	
	If "yes", indicate with who:		
D 50a	Media	☐	
D 50b	General Public	☐	
D 50c	Health Authorities	☐	
D 50d	Consumer groups	☐	
8. Main Challenges to implementation			
D 51	**Mark the top three challenges confronted by the intervention:**	**Check up to three**	
	Technical		
D 51a	Technical assistance/ programme support	☐	
D 51b	Programme design	☐	
D 52c	Monitoring and evaluation	☐	
D 52d	Training	☐	

	Programme management/implementation		
D 52e	Procurement	☐	
	Acceptability by:		
D 52f	Government	☐	
D 52g	Health community	☐	
D 52h	Academia	☐	
D 52i	Intervention partcipants	☐	
D 52j	Others	☐	
D 52k	If "other" challenges, please speficy	**Type your answer here**	
D 52l	Funding for product	☐	
D 52m	Funding for delivery	☐	
D 52n	Coordination	☐	
D 52o	Adherence/ compliance (use of products by intended participants)	☐	
D 52p	Other challenges	☐	
D 52q	If "other" challenges, please speficy	**Type your answer here**	

9. Describe lessons learned or experiences that you think would be useful for others to know (type your description in the space below)

10. Describe any additional documents attached to supplement your description (type your description in the space below)

Note: Include documents such as intervention protocols or descriptions, national strategies/policies, pictures of sachets and boxes, communications materials, press releases, etc.

1 **Include a picture of the sachet (please include)**
2 **Include a picutre of the box or bag or other packaging (please include)**
3
4
5
6
7

Response options for the Excel screen shots with a drop down menu

SHEET 1 : GENERAL INFORMATION	
Question number	Drop down menu options
A8: Does your country have a national nutrition policy that includes home fortification?	Yes No Don't know
A10: Does your intervention currently distribute micronutrient powders (MNPs)?	Yes No Don't know
A11: Do you have multiple MNP interventions?	Yes No Don't know
A12: Does your intervention intend to start distributing MNPs in the next 12 months?	Yes No Don't know Already distributing
A13: If you are not planning and intervention, is there an interest in your country to start an MNP intervention in the future?	Yes No Don't know
A15: Does your intervention currently distribute LNS?	Yes No Don't know
A16: Do you have multiples LNS interventions?	Yes No Don't know
A17: Does your intervention intend to start distributing LNS in the next 12 months?	Yes No Don't know Already distributing
A18: If you are not planning an intervention, is there an interest in your country to start an LNS intervention in the future?	Yes No Don't know
A20: Does your intervention currently distribute CFS?	Yes No Don't know
A21: Do you have multiple CFS interventions?	Yes No Don't know
A22: Does your intervention intend to start distributing CFS in the next 12 months?	Yes No Don't know Already distributing
A23: If you are not planning an intervention, is there an interest in your country to start a CFS intervention in the future?	Yes No Don't know

SHEET 2 : MICRONUTRIENT POWDERS (MNPS)	
B4: Indicate the approach that best describes your intervention	Paid by participant Public/Free distribution Other
B4b: If paid for by participants, is the cost of sachets subsidized?	Yes No

	Don't know
B5: Is your intervention a standalone activity or is it integrated in a multi-sectorial approach?	Stand alone intervention Integrated in multi-sectorial approach
B9: What is the scale of the intervention right now?	Pilot Sub-national distribution National distribution Intervention not yet started Don't know Other
B10: What is the planned final scale of the intervention?	Pilot Sub-national distribution National distribution Intervention not yet started Don't know Other
B11: What age group does your intervention target?	6-9 months 6-18 months 6-23 months 6-36 months 6-59 months 12-24 months Pregnant and lactating women School age children
B15: Specify the iron compound in the MNP	NaFeEDTA Microencapsulated Ferrous Fumarate Ferrous Sulphate Other Don't know
B17: Is the MNP a registered product in the country?	Yes No In process/under review Don't know
B18: If yes, how has the MNP been registered?	Food Pharmaceutical Nutritional supplement Not yet decided Don't know Other
B19: Does the MNP have government approval? (for example, ethical clearance, proof of safety, standard established)	Yes No In process/under review Don't know
B20: Who procures the MNP?	Government WFP UNICEF UNHCR GAIN MSF Helen Keller International World vision Action against hunger

	Save the children Other Don't know
B21: Is the product partly, or entirely, locally manufactured?	Yes No Don't know
B23: Is the product protected by a patent or any other legal instrument?	Yes No In process/under review Don't know
B24: Is there a protocol to check the quality of the MNPs?	Yes No Don't know Intervention not yet started
B25: Have any problems been experienced with the quality of the MNPs at any time?	Yes No Don't know Intervention not yet started
B26: How is the product packaged for distribution?	Bag Box Other
B27: Does the MNP have a local name?	Yes No Under development Don't know
B28: Was a local image developed for the MNP?	Yes No Under development Don't know
B28a: If "yes", please indicate where the local image is displayed	Bag/box Sachet Both (bag/box and sachet) None Don't know
B32: What is the frequency of distribution of MNPs to participants?	One distribution a month One distribution every 3 months One distribution every 6 months One distribution a year Don't know Other
B34: What is the recommended consumption schedule?	1 sachet per day other
B35: Is there a behavior change communication strategy in place?	Yes No Under development Don't know Intervention not yet started
B41: Is there a monitoring and evaluation plan?	Yes No Don't know Intervention not yet started
B42: Is monitoring information collected on procurement of MNPs?	Yes No

	Don't know Intervention not yet started
B43: Is monitoring information collected on MNP supplies?	Yes No Don't know Intervention not yet started
B44: Is monitoring information collected on training of MNP providers and distributers?	Yes No Don't know Intervention not yet started
B45: Is monitoring information collected on behavior change communication?	Yes No Don't know Intervention not yet started
B46: Is monitoring information collected on MNP coverage?	Yes No Don't know Intervention not yet started
B47: Is monitoring information collected on appropriate use of MNPs?	Yes No Don't know Intervention not yet started
B48: Are impact evaluations conducted?	Yes No Don't know Intervention not yet started
B49: Is there a strategy for dealing with reports of adverse effects associated to MNPs?	Yes No Don't know Intervention not yet started
B50: Is there a coordinating body that oversees the development/implementation of this intervention?	Yes No Don't know Intervention not yet started
B51: Have you shared information about the MNP intervention with those that are not directly involved in its implementation?	Yes No Don't know Intervention not yet started
SHEET 3 : LIPID –BASED NUTRIENT SUPPLEMENTS (LNS)	
C4: Indicate the approach that best describes your intervention	Paid by participant Public/free distribution Don't know
C4b: If paid for by participants, is the cost of sachets subsidized?	Yes No Don't know
C5: Is your intervention a stand alone activity or is it integrated in a multi-sectorial approach?	Stand alone intervention Integrated in multi-sectorial approach
C9: What is the scale of the intervention right now?	Pilot Sub-national distribution National distribution Intervention not yet started

	Don’t know Other
C10: What is the planned final scale of the intervention?	Pilot Sub-national distribution National distribution Intervention not yet started Don’t know Other
C11: What age group does your intervention target?	6-9 months 6-18 months 6-23 months 6-36 months 6-59 months 12-24 months Pregnant and lactating women School age children Other
C15: Specify the iron compound in the LNS	Non capsulated Feso4 Other Don’t know
C16: Is the LNS a registered product in the country?	Yes No In process/under review Don’t know
C17: If yes, how has the LNS been registered?	Food Pharmaceutical Nutritional supplement Not yet decided Don’t know Other
C18: Does the LNS have government approval? (for example, ethical clearance, proof of safety, standard established)	Yes No In process/under review Don’t know
C19: Who procures the LNS?	Government WFP UNICEF UNHCR GAIN MSF Helen Keller International World vision Action against hunger Save the children Other Don’t know
C20: Is the product partly, or entirely, locally manufactured?	Yes No Don’t know
C22: Is the product protected by a patent or any other legal instrument?	Yes No In process/under review Don’t know
C23: Is there a protocol to check the quality of the LNS?	Yes

	No Don’t know Intervention not yet started
C24: Have any problems been experienced with the quality of the LNS at any time?	Yes No Don’t know Intervention not yet started
C25: How is the product packaged for distribution?	Bag Box Other
C26: Does the LNS have a local name?	Yes No Under development Don’t know
C27: Was a local image developed for the LNS?	Yes No Under development Don’t know
C27a: If "yes", please indicate where the local image is displayed	Bag/ Box Sachet Both None Don’t know
C31: What is the frequency of distribution of LNS to participants?	One distribution a month One distribution every 3 months One distribution every 6 months One distribution a year Don’t know Other
C34: Is there a Behavior Change Communication strategy in place?	Yes No Under development Don’t know Intervention not yet started
C39: Is there a monitoring and evaluation plan?	Yes No Under development Don’t know
C40: Is monitoring information collected on procurement of the LNS?	Yes No Don’t know Intervention not yet started
C41: Is monitoring information collected on LNS supplies?	Yes No Don’t know Intervention not yet started
C42: Is monitoring information collected on training of LNS providers and distributers?	Yes No Don’t know Intervention not yet started
C43: Is monitoring information collected on Behavior Change Communication?	Yes No Don’t know Intervention not yet started

C44: Is monitoring information collected on LNS coverage?	Yes No Don't know Intervention not yet started
C45: Is monitoring information collected on appropriate use of LNS?	Yes No Don't know Intervention not yet started
C46: Are impact evaluations conducted?	Yes No Don't know Intervention not yet started
C47: Is there a strategy for dealing with reports of adverse effects associated to LNS?	Yes No Don't know Intervention not yet started
C48: Is there a coordinating body that oversees the development/ implementation of this intervention?	Yes No Don't know Intervention not yet started
C50: Have you shared information about the LNS intervention with those that are not directly involved in it's implementation?	Yes No Don't know Intervention not yet started
SHEET 4 : CFS	
D4: Indicate the approach that best describes your intervention	Paid by participant Public/free distribution Don't know
D4b: If paid for by participants, is the cost of sachets subsidized?	Yes No Don't know
D5: Is your intervention a stand alone activity or is it integrated in a multi-sectorial approach?	Stand alone intervention Integrated in multi-sectorial approach
D10: What is the planned final scale of the intervention?	Pilot Sub-national distribution National distribution Intervention not yet started Don't know Other
D11: What age group does your intervention target?	6-9 months 6-18 months 6-23 months 6-36 months 6-59 months 12-24 months Pregnant and lactating women School age children Other
D15: Specify the iron compound in the CFS	NaFeEDTA Microencapsulated Ferrous Fumarate

	Ferrous Sulphate Other Don't know
D16: Is the CFS a registered product in the country?	Yes No In process/under review Don't know
D17: If yes, how has the CFS been registered?	Food Pharmaceutical Nutritional supplement Not yet decided Don't know Other
D18: Does the CFS have government approval? (for example. ethical clearance, proof of safety, standard established)	Yes No In process/under review Don't know
D19: Who procures the CFS?	Government WFP UNICEF UNHCR GAIN MSF Helen Keller International World vision Action against hunger Save the children Other Don't know
D20: Is the product partly, or entirely, locally manufactured?	Yes No Don't know
D22: Is the product protected by a patent or any other legal instrument?	Yes No In process/under review Don't know
D23: Is there a protocol to check the quality of the CFS?	Yes No Don't know Intervention not yet started
D25: How is the product packaged for distribution?	Bag Box Other
D26: Does the CFS product have a local name?	Yes No Under development Don't know
D27: Was a local image developed for the CFS?	Yes No Under development Don't know
D27a: If "yes", please indicate where the local image is displayed	Bag/ Box Sachet Both

	None Don’t know
D31: What is the frequency of distribution of the CFS to participants?	One distribution a month One distribution every 3 months One distribution every 6 months One distribution a year Don’t know Other
D33: What is the recommended consumption schedule?	One sachet per day Other
D34: Is there a Behavior Change Communication strategy in place?	Yes No Under development Don’t know Intervention not yet started
D40: Is there a monitoring and evaluation plan?	Yes No Under development Don’t know
D41: Is monitoring information collected on procurement of CFSs?	Yes No Don’t know Intervention not yet started
D42: Is monitoring information collected on CFS supplies?	Yes No Don’t know Intervention not yet started
D43: Is monitoring information collected on training of CFS providers and distributers?	Yes No Don’t know Intervention not yet started
D44: Is monitoring information collected on Behavior Change Communication?	Yes No Don’t know Intervention not yet started
D45: Is monitoring information collected on CFS coverage?	Yes No Don’t know Intervention not yet started
D46: Is monitoring information collected on appropriate use of CFS?	Yes No Don’t know Intervention not yet started
D47: Are impact evaluations conducted?	Yes No Don’t know Intervention not yet started
D48: Is there a strategy for dealing with reports of adverse effects associated to CFSs?	Yes No Don’t know Intervention not yet started
D49: Is there a coordinating body that oversees the development/ implementation of this intervention?	Yes No

	Don’t know Intervention not yet started
D50: Have you shared information about the CFS intervention with those that are not directly involved in it's implementation?	Yes No Don’t know Intervention not yet started

Appendix C. List of organizations and country where they work involved in completing at least one questionnaire, Home Fortification Global Assessment 2011

ACF-Spain (Colombia, Mali, Mauritania)
BRAC, Bangladesh
Cellule de la Lutte Contre la Malnutrition (CLM), Senegal
Government of Angola
GRET/NUTRIFASO (Burkina Faso, Madagascar)
Ghana Health Service, Ghana
Helen Keller International (HKI), Cameroon, Cote d'Ivoire, Mali
IRD, Burkina Faso
Micronutrient Initiative (Afghanistan, Pakistan)
Ministry of Economic and Social Inclusion, Ecuador
Ministry of Health, Argentina
Ministry of Health, Belize
Ministry of Health, Botswana
Ministry of Health, Comoros
Ministry of Health, Eritrea
Ministry of Health, Guinea
Ministry of Health, Indonesia
Ministry of Health, Madagascar
Ministry of Health, Maldives
Ministry of Health, Mali
Ministry of Health, Sao Tome & Principe
Ministry of Health, Saudi Arabia
Ministry of Health, Senegal
Ministry of Health, Sierra Leone
Ministry of Health and Social Welfare, Liberia
Ministry of Public Health, Bahrain
Ministry of Public Health, Nutrition Institute, Cuba
Ministry of Public Health and Sanitation, Kenya
National Nutrition Agency, Gambia
National Nutrition Office, Madagascar
United Nations High Comissioner for Refugees (UNHCR), Kenya
UNICEF. Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Bangladesh, Barbados & Eastern Caribbean, Belarus, Benin, Bhutan, Bolivia, Bosnia & Herzegovina, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, China, Colombia, Comoros, Congo-Brazzaville, Cote d'Ivoire, Croatia, Cuba, Democratic Republic of Congo, Egypt, El Salvador, Eritrea, Former YR Macedonia, Gabon, Gambia, Georgia, Ghana, Guatemala, Haiti, Honduras, India, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Lao PDR, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Moldova, Mongolia, Morroco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Occupied Palestinian Territory, Pacific, Pakistan, Nepal, Pakistan, Paraguay, Peru, Philippines, Romania, Russia, Sao Tome & Principe, Senegal, Serbia, Sierra Leone, South Africa, South Sudan, Sri Lanka, Sudan
World Food Programme (WFP) , Afghanistan, Bangladesh, Burkina Faso, Cambodia, Colombia, Cuba, Dominican Republic, Kenya, Lao PDR, Madagascar, Mali, Mozambique, Nepal, Peru, Philipines
Wuqu'Kawoq, Guatemala

Appendix D. Reported formulations of MNP, LNS and CFS home fortification products, Home Fortification Global Assessment 2011

Table D1. Reported Formulations for MNP Interventions [a], Home Fortification Global Assessment 2011

Micronutrients	Formula 1[bc]	Formula 2[cd]	Formula 3[ce]	Formula 4[cf]	Formula 5[cg]	Formula 6[hc]	Formula 7[ic]	Formula 8[j]	Formula 9[k]	Formula 10[l]
Vitamin A µg	300	400	100	375	250	417	400	400	500	10
Vitamin C mg	30	30	60	35	30	30	30	60	60	600
Vitamin D µg	-	5	5	5	200	5	10	5	5	100
Vitamin E mg	-	5	5	6	9	6	5	5	7	140
Thiamine (vitamin B1) mg	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	18
Riboflavin (vitamin B2) mg	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	18
Vitamin B6 (pyridoxine) mg	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	20
Vitamin B12 (cobalamine) µg	-	0.9	0.9	0.9	0.9	1	0.9	0.9	1.8	36
Folic Acid µg	160	150	150	150	150	150	150	150	180	6
Niacin (vitamin B3) mg	-	6	6	6	6	5	6	6	12	240
Iron mg	12.5	10	12.5	10	10	10	10	10	4	250
Zinc mg	5	4.1	5	4.1	4.1	6	4.1	4.1	4	112
Copper mg	-	0.6	0.6	0.3	-	0	0.6	0.3	0.6	12
Iodine µg	-	90	50	30	-	50	90	92	120	-
Selenium µg	-	17	-	-	-	20	17	-	-	-
Vitamin K mcg	-	-	-	30	-	-	-	30	1.2	1.2
Pantoneat B5-3	-	-	-	-	-	n/a	-	-	-	-
Maltodextrin	-	-	-	-	-	n/a	-	-	-	-

[a] Seven planned MNP interventions did not provide this information.
[b] Frequently called the "Five micronutrients anemia formula" for children 6-59 months old. Currently used in 15 implemented and expected to be used in 6 planned interventions.
[c] The iron is microencapsulated ferrous fumarate
[d] Frequently called the "Standard 15 micronutrients formula" for children 6-59 months old. Currently used in 13 implemented interventions and expected to be used in 11 planned interventions.
[e] Formula for children 6-59 months and used in one intervention
[f] Formula for children 6-59 months and used in one intervention
[g] Known as the "Heinz formula" for children 6-59 months. Used in one intervention.
[h] Formula for children 6-23 months used in one interventions.
[i] Formula for children 6-23 months used in one interventions.
[j] Formula for children 6-59 months used in one interventions. The iron is ferric pyrophosphate micronized
[k] Formula for school age children currently used in two interventions and expected to be used in one planned intervention. The iron is sodium iron ethylenediaminetetraacetic acid (NaFeEDTA).
[l] Formula for school age children used in two interventions. The iron is ferric pyrophosphate micronized.

Table D.2 Reported Formulations for LNS Interventions [a], Home Fortification Global Assessment 2011

	Formula 1[b]	**Formula 2[c]**
Generic name	Medium quantity	Small quantity
Product brand name	Plumpy'doz™	Nutributter™
Container size and type	325g pot	20 g sachet
Portion size	3 teaspoons (46g)	1 sachet (20g)
Energy kcal	250	110
Protein g	6	3
Fat g	16	7
Vitamin A mg	0.4	0.4
Vitamin C mg	30	30
Vitamin E mg	6	-
Thiamine (vitamin B1) mg	0.5	0.3
Riboflavin (vitamin B2) mg	0.5	0.4
Niacin (vitamin B3) mg	6	4
Vitamin B6 (pyridoxine) mg	0.5	0.3
Vitamin B12 (cobalamine) µg	0.9	0.5
Pantothenic Acid mg	2.9	1.8
Folate µg	198	80
Iron[d] mg	9	9
Zinc mg	9	4
Copper mg	0.3	0.2
Calcium mg	387	100
Selenium µg	17	10
Iodine µg	90	90
Phosphorus mg	275	82
Potassium mg	310	152
Magnesium mg	60	16
Manganese mg	0.17	0.08

[a] One implemented and one planned LNS intervention did not provide this information.

[b] Currently used in 13 implemented interventions and one planned intervention.

[c] Currently used in three implemented interventions and one planned intervention.

[d] The iron is non-encapsulated Ferrous Sulphate (FESO4).

Table D.3 Reported Formulations for CFS Interventions, Home Fortification Global Assessment 2011

Content	Formula 1[a]	Formula 2[b]	Formula 3[c]	Formula 4[d]	Formula 5[e]	Formula 6[f]	Formula 7[g]	Formula 8[h]	Formula 9[i]	Formula 10[j]
Protein g	15.0	3.0	4.6	4.0	28.8	-	15.0	-	3.3	16.0
Lipid g	-	5.1	3.8	-	-	-	9.0	-	-	-
α-Linolenic acid mg	-	-	149.4	-	-	-	-	-	-	-
α-Linoleic acid mg	-	-	1643.7	-	-	-	-	-	-	-
Iron mg	6.5	7.5	8.5	27.0	240.6	25.0	16.0	179.94	7.5	2.5 & 4.0[j]
Zinc mg	1.65	1.6	4.2	288.0	89.7	8.0	3.0	81.17	5.0	5.0
Calcium mg	630.0	250.4	312.8	55.0	3.8	800.0	500.0	-	-	470.0
Vitamin A mg	495.5	240.0	206.6	128.0	4771.6	250.0	1500.0	26390.8	250.0	1664.0
Vitamin C mg	0.80	22.5	16.3	-	247.3	-	40.0	-	-	100.0
Vitamin D mg	200.0	150.0	101.8	-	-	4.5	250.0	-	5.0	4.0
Thiamine (vitamin B1) mg	0.8	0.3	0.3	0.27	670.8	0.4	0.8	23.99	0.5	0.1
Riboflavin (vitamin B2) mg	0.5	0.3	0.3	0.31	2180.5	0.6	0.5	15.99	0.5	0.4
Niacin (vitamin B3) mg	-	-	-	34.0	-	-	-	-	-	-
Vitamin B6 (pyridoxine) mg	0.13	-	-	-	-	-	-	-	-	-
Vitamin B12 (cobalamine) mg	0.005	0.7	0.5	0.19	4.9	0.9	1.0	39.99	0.5	2.0
Folic Acid µg	0.2	80.0	76.0	38.0	653.7	-	50.0	-	75.0	60.0
Phosphorus mg	600.0	-	-	-	-	-	-	-	-	-
Iodine mg	0.05	63.0	-	-	-	0.2	-	-	-	-
Selenium mg	-	10.2	-	-	102,900	-	-	-	-	-
Vitamin K mg	-	-	-	-	134.6	50	-	-	-	-
Magnesium mg	-	-	-	-	541.8	-	-	-	-	-
Biotine mg	-	-	-	-	-	12	-	-	-	-
Potassium mg	-	-	-	-	-	-	610.0	-	-	-
Glucide g	-	-	-	-	-	-	60.0	-	-	-
Nicotinamide *no units reported*	-	-	-	-	-	-	-	159.94	-	-

[a] Formula 1 used in two interventions in Botswana, per 100g. Formula for 6-36 months old children and 37 to 59 months old children. Amount differs per child depending on age and needs/day. Type of iron not specified.
[b] Formula 2 used in Madagascar, per 1 sachet (quantity not specified, one sachet per day). Formula for 12-59 months old children. Iron is microencapsulated ferrous fumarate.
[c] Formula 3 used in Madagascar, per 1 sachet (quantity not specified, formula for 6-23 months with 2 sachets per day for 6 to 12 months and 3 sachets for 12 to 24 months). Iron is microencapsulated ferrous fumarate.
[d] Formula 4 used in Belize, per 450 gm. Formula for 6-23 months. Iron is aminochelated iron.
[e] Formula 5 used in Burkina Faso, per 1 sachet (quantity not specified, one sachet for 2 weeks). Formula for 6-23 months old children. Iron type is electrolytic iron.
[f] Formula 6 used in Burkina Faso, per 1 sachet (quantity not specified; one sachet for 3 days). Formula for pregnant and lactating women. Iron type is electrolytic iron.
[g] Formula 7 used in Cote d'Ivoire, per 1 sachet (50 g sachet; one sachet per day). Formula for 6-23 months. The iron is sodium iron ethylenediaminetetraacetic acid (NaFeEDTA).
[h] Formula 8 used in Ghana, per 1 sachet (1 sachet to 10kg of flour). Formula for the household. Type of iron not specified.
[i] Formula 9 used in two interventions in China, per 1 sachet (1 sachet per day). Formula for 6-23 months old children. Iron is NaFeEDTA & ferrous fumarate.
[j] Formula 10 used in Niger, per 100 g (250 g per day). Formula for 6-23 months. Iron is 2.5 mg NaFeEDTA & 4.0 mg ferrous sulfate.

Appendix E. Regimen summaries for each intervention, Home Fortification Global Assessment 2011

Table E.1 Implemented MNP interventions for each target group and by country: distribution mechanisms, number of sachets distributed, recommended intake and MNP formulation, Home Fortification Global Assessment 2011

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
6-23 months	Bangladesh (71-3)	Community based	Every 2 months	30 sachets	Flexible (60 sachets over a 4 month period)/child OR 1 sachet every other day/child	Formula 1
	Bolivia (84)	Health facilities, private	Every 6 months	60 sachets	One sachet daily	Formula 1
	Cambodia (18)	Health facilities, Scheduled events, Community based	Monthly	15 sachets	One sachet every other day	Formula 2
	China (19-2)	Health facilities, Community based	Monthly	20 sachets	5 sachets per week	Formula 5
	Indonesia (20-1)	Scheduled events	Monthly	15 sachets	One sachet every other day	Formula 6
	Kyrgyzstan (9)	Health facilities	Every 2 months	30 sachets	One sachet every other day	Formula 1
	Lao PDR (22-1)	Health facilities, Scheduled events	Every 2 months	30 sachets	One sachet every other day	Formula 2
	Mongolia (23)	Health facilities, Scheduled events	Every 6 months	60 sachets	One sachet every 3 days OR One sachet daily for 2 months followed by a 4 month break	Formula 7
	Nepal (76)	Health facilities, Community based	Every 6 months	60 sachets	One sachet daily	Formula 2

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
	Pakistan (79)	Health facilities, Community based	Every 3 months	90 sachets	One sachet daily	Formula 2
	Sri Lanka (80)	Health facilities	Monthly	15 sachets	One sachet every other day	Formula 2
	Tajikistan (14)	Health facilities	Monthly	Missing	One sachet daily	Formula 2
	Uruguay (102)	Community based	Monthly	30 sachets	One sachet daily	Formula 2
6-36 months	Bangladesh (71-4)	Community based	Every 2 months	30 sachets	Flexible (60 sachets over a 4 month period)/child OR 1 sachet every other day/child	Formula 1
	Peru (100-1)	Health facilities	Monthly	15 sachets	One sachet every other day	Formula 1
	Peru (100-2)	Health facilities	Monthly	15 sachets	One sachet every other day	Formula 1
12-24 months	Cuba (88)	Health facilities	Every 6 months	60 sachets	One sachet daily	Formula 1
6-59 months	Afghanistan (69)	Scheduled events	Every 6 months	60 sachets	One sachet daily	Formula 2
	Bangladesh (129)	Community market based	Demand based/for sale 0.037USD per sachet	As much as the family wants to buy; but no more than 60 sachets per/child at one time	One sachet every other day for 4 months/ child	Formula 2
	Bangladesh (71-2)	Market based, private sector	Demand based/for sale 0.027 USD per sachet; available at pharmacies	As much as the family wants to buy; recommend 60 sachets at one time to cover a 2-4 month period	One sachet daily	Formula 1
	Colombia (85)[d]	Community based	Monthly	60 sachets	One sachet daily	Formula 1

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
	Colombia (87-1)	General food distribution (as part of a comprehensive child care program)	Variable (has been delivered on a weekly, bi-weekly and monthly	Variable (different amounts have been delivered according to whether a weekly, bi-weekly or monthly distribution)	One sachet daily	Formula 1
	Colombia (87-2)	General food distribution (as part of a comprehensive child care program)	Variable (has been on a biweekly and monthly basis)	Variable (different amounts have been delivered according to bi-weekly or monthly distribution)	One sachet daily	Formula 1
	Colombia (87-3)	Community based (as part of a comprehensive child care program)	Every 3 months	60 sachets	One sachet daily	Formula 1
	Colombia (87-4)	General food distribution (as part of emergency response)	Monthly	30 sachets	One sachet daily	Formula 1
	Dominican Republic (89)	Health facilities, Scheduled events	Every 8 months	60 sachets	One sachet daily	Formula 2
	Ecuador (90)	Community based, Child development units	Monthly	60 sachets	One sachet daily Monday-Friday	Formula 1
	Guatemala (91-1)	Health facilities, Scheduled events, Community based	Every six months	60 sachets	One sachet daily	Formula 1
	Guatemala (91-2)	Health facilities, Scheduled events, Community based	Every six months	60 sachets	One sachet daily	Formula 2

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
	Nepal (77-1)[e]	Community based, General food distribution	Every 3 months	90 sachets	Daily	Formula 8
	Nepal (77-2)	Health facilities	Monthly	15 sachets	One sachet every other day	Formula 3
School age children	Afghanistan (70)	School based	Per meal/day	Not distributed to beneficiaries. Prepared with school meals and served	1 sachet for 20 children/day	Formula 10
	Ghana (114)	School based	2 OR 5 days/week	Not distributed to beneficiaries. Prepared with school meals and served	1 sachet for 20 children/day	Formula 10
	Madagascar	School based	Every 3 months	Schools receive enough for daily rations for one trimester	1 sachet for 20 children/day	Formula 9

[a] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[b] Examples of community-based include groups or house visits and community events.
[c] See Appendix D Table D1 for the details about the micronutrient content of each formula.
[d] Distribution of 60 sachets for daily use every month is atypical. Unable to confirm data with Columbia (85).
[e] Nepal (71-1) reported that in 2011 the schedule would change to distribute 90 sachets every 6 months with recommended intake every other day.

Table E.2 Planned MNP interventions for each target group and by country: distribution mechanisms, number of sachets distributed, recommended intake and MNP formulation, Home Fortification Global Assessment 2011

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
6-23 months	Afghanistan (68-2)	Health facilities, Community based	Every 6 months	60 sachets	One sachet daily	Formula 2
	Bangladesh (71-1)	Community based	Every 6 months	90 sachets	90 sachets over 6 months OR One sachet every other day	Formula 1
	Bangladesh (71-5)	Community based	Every 2 months	30 sachets	Flexible (60 sachets over a 4 month period)/child OR 1 sachet every other day/child	Formula 1
	Haiti (94)	Health facilities, Community based	Missing	Missing	Missing	Formula 2
	Indonesia (20-2)	Scheduled events, Community based	Monthly	15 sachets	One sachet every other day	Formula 2
	Liberia (118-1)	Missing	Missing	Missing	Missing	Missing
	Nicaragua (97)	Community based	Monthly	30 sachets	One sachet daily	Formula 2
	Pakistan (78)	Community based	Monthly	30 sachets	One sachet daily	Formula 1
	Philippines (26)	Health facilities, Scheduled events	Missing	Missing	Missing	Formula 2
	Philippines (27-1)	Health facilities, Scheduled events, Community based	Missing	30 sachets	Missing	Formula 2
	Rwanda (44)	Missing	Every 3 months	30 sachets	Missing	Formula 2
	Sierra Leone (127)	Missing	Missing	Missing	Missing	Missing

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
	Tanzania (46)	Health, facilities, Community based	Demand based/for sale 0.02USD per sachet by community based health workers	Missing	Missing	Missing
	Timor Leste (29)	Health facilities, Scheduled events, General food distribution	Missing	Missing	Missing	Formula 2
	Uzbekistan (17)	Health facilities	Monthly	30 sachets	One sachet per day	Formula 2
	Zambia (48)	Missing	Missing	Missing	Missing	Missing
6-36 months	Bangladesh (71-6)	Community based	Every 2 months	30 sachets	Flexible (60 sachets over a 4 month period)/child OR 1 sachet every other day/child	Formula 1
	China (19-1)	Health facilities, Community based, General food distribution	Missing	Missing	Missing	Missing
	Myanmar (24)	Health facilities, General food distribution (though Early Child Development Centers)	Monthly	30 sachets	Daily	Formula 2
6-59 months	Cameroon (106-1)	Missing	Missing	Missing	Missing	Missing
	Colombia (87-5_)	Early childhood development Centers	Once during the duration of the project	Missing	Daily	Formula 1
	Colombia (87-6)	Health facilities	Monthly	30 sachets	Daily	Formula 1

Target group	Country	MNP distributed through [a, b]	Frequency of distribution to participants	# of sachets received each distribution	Recommended MNP intake schedule	MNP formulation [c]
	Kenya (36)	Health facilities	Monthly	30 sachets (only 8 sachets given to children receiving CSB or RUTF)	Daily OR if other fortified foods are being given, then only 2 sachets per week	Formula 4
School age children	Burkina Faso (105)	School based	Prepared and served in school	Prepared with school meals and served	Daily	Missing
	Indonesia (21-2)	School based	Distributed to the school 3x/week	Multi dose sachets to schools	1 meal/ 3x/ week	Formula 9

[a] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[b] Examples of community-based include groups or house visits and community events.
[c] See Appendix D Table D1 for the details about the micronutrient content of each formula.

Table E.3 Implemented LNS interventions for each target group and by country: distribution mechanisms, number of sachets distributed, recommended intake and MNP formulation, Home Fortification Global Assessment 2011

Target group	Country	LNS distributed through [a, b]	Frequency of distribution to participants	# of pots or sachets received each distribution	Recommended LNS intake schedule	LNS formulation [c]
6-23 months	Lao PDR	Health facilities	Monthly	4 pots	1 pot per week/child	Medium quantity
	Philippines	Health facilities, Scheduled events	Monthly	4 pots	3 tablespoons 3x day/child	Medium quantity
	Kenya	Health facilities	Monthly	28 sachets	½ sachet 2x day/child	Small quantity
	South Sudan	Scheduled events, General food distribution	Monthly	Missing	3 teaspoons 3x day/child	Medium quantity
	South Sudan	Health facilities, General food distribution	Monthly	4 pots	3 teaspoons 3x day/child	Medium quantity
	Syria	Community based	Bi-monthly	60 sachets	1 sachet day/child	Small quantity
	Chad	Health facilities, Scheduled events	Monthly	5 pots	3 teaspoons 3x day/child	Medium quantity
	Liberia	Health facilities, General food distribution	Bi- annual	8 pots	4 pots per month/child for two consecutive months followed by 4 month break	Medium quantity
	Mali	Health facilities	Monthly	4 pots	1 pot per week/child	Medium quantity
	Mauritania	Health facilities, Scheduled events, Community based	Monthly	4 pots	1 pot per week/child	Medium quantity
	Niger	General food distribution	Monthly	4 pots	1 pot per week/child	Medium quantity
	Niger	Health facilities, General food distribution	Monthly	4 pots	1 pot per week/child	Medium quantity

Target group	Country	LNS distributed through [a, b]	Frequency of distribution to participants	# of pots or sachets received each distribution	Recommended LNS intake schedule	LNS formulation [c]
6-36 months	Madagascar	Health facilities, Community based	Depending on the nutritional status (emergency setting). Some participants pay 0.94USD	4 pots	1 pot per week/ child	Medium quantity
	Uganda	Health facilities	Monthly	4 pots	Missing	Medium quantity
	Mauritania	Health facilities, Scheduled events, Community based	Monthly	4 pots	1 pot per week/child	Medium quantity
6-59 months	Guatemala	Scheduled events, Community based	Monthly	4 pots	46 grams 3x per day/child	Medium quantity
	Guatemala	Scheduled events, community based	Monthly	30 sachets	1 sachet day/child	Small quantity

[a] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[b] Examples of community-based include groups or house visits and community events.
[c] See Appendix D for details about the medium quantity LNS and small quantity LNS formulations

Table E.4 Planned LNS interventions for each target group and by country: distribution mechanisms, number of sachets distributed, recommended intake and LNS formulation, Home Fortification Global Assessment 2011

Target group	Country	LNS distributed through [a, b]	Frequency of distribution to participants	# of pots or sachets received each distribution	Recommended LNS intake schedule	LNS formulation [c]
6-12 months	DR Congo	Health facilities	Monthly	Missing	1 sachet per day	Small quantity
6-23 months	Indonesia	Scheduled Events, Community Based	Monthly	60 per child/month	2 sachets per child/day	Medium quantity
	Cameroon	Missing	Monthly	Missing	Missing	Missing

[a] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.
[b] Examples of community-based include groups or house visits and community events.
[c] See Appendix D for details about the medium quantity LNS and small quantity LNS formulations

Table E.5 Implemented CFS interventions for each target group and by country: distribution mechanisms, amount distributed, recommended intake and CFS formulation, Home Fortification Global Assessment 2011

Target group	Country	CFS distributed through [a, b]	Frequency of distribution to participants	Amount received each distribution	Recommended CFS intake schedule	CFS formulation [c]
6-23 months	Madagascar (39.3)	Schedules events, Community based, Private sector, "baby restaurants" (Hotelin-jazakely)[d]	Missing. Participants pay 0.075 USD per sachet (free for children diagnosed with MAM)	Need based	2 sachets/day for 6-12 months & 3 sachets/day for 12-24 months	Formula 3
	Belize	Health facilities, Scheduled events, Community based	Monthly. Demand based/for sale. Participants pay for product, no price reported	4-5 pounds per child/month	3-4 cups/day per child	Formula 4
	Burkina Faso	Community based, Private sector	Demand based/for sale 0.27USD per sachet	Participants must purchase a packet every 2 weeks	1 sachet for 2 weeks	Formula 5
	Cote d' Ivoire	Community based, Private sector	Missing 0.50USD per 50 g sachet	Unknown	1 sachet per day	Formula 7
	China	Health Facilities, Community Based	Monthly	30 sachets	1 sachet per day	Formula 9
	China	Health Facilities, Community based	Monthly	30 sachets	1 sachet per day	Formula 9
	Niger	Health facilities, Scheduled events, General food distribution	Monthly	8.33 ration per child	250g per day	Formula 10
6-36 months	Botswana	Health facilities	Monthly	Two 2.5kg bags per 6-18mo child/month and 3 2.5kg bags per19-36 child/month	Varies Determined according to age and needs/day	Formula 1
12-59 months	Madagascar (39.2)	Scheduled events, community based & Private Sector	Missing/ 0.05USD per sachet	Need based	One sachet per day	Formula 2

Target group	Country	CFS distributed through [a, b]	Frequency of distribution to participants	Amount received each distribution	Recommended CFS intake schedule	CFS formulation [c]
37-59 months	Botswana	Health Facilities	Monthly	One 2.5 kg bag per child/month	Varies Determined according to age and needs/day	Formula 1
Pregnant and lactating women	Burkina Faso	Community based & Private sector	Demand based/for sale 0.27USD per sachet	Participants must purchase a packet every 3 days	One sachet for 3 days	Formula 6
Household	Ghana	Scheduled events, Community based	Demand based /for sale 0.13USD	Missing	As per stated requirement based on consumption pattern	Formula 8

[a] Examples of scheduled health facility events include child health days, immunization campaigns, and outreach.

[b] Examples of community-based include groups or house visits and community events.

[c] See Appendix D for details about CFS Formulas 1-10

[d] The "baby restaurants" was part of an urban based project where ~64 locations (baby restaurants) were established and mothers come and collect the product at a low price and also receive nutritional counseling.

Appendix F. Local names of MNP and CFS products [a] , Home Fortification Global Assessment 2011

Table F.1 Local names of MNP and CFS by implemented or planned interventions, Home Fortification Global Assessment 2011

Type of Intervention [a]	Country	Local Name	Translation
MNP Implemented Interventions	Afghanistan	Powder Qowat	Power powder
	Bangladesh	Pushitikona	Particles of nutrition
	Bangladesh	Monimix	A mix for your darling baby
	Bolivia	Chispitas Nutricionales	Nutritional Sprinkles
	Cambodia	Masao Vitamine	Vitamin Powder
	Colombia	Chispitas Nutricionales	Nutritional Sprinkles
	Colombia	Chispitas Nutricionales	Nutritional Sprinkles
	Cuba	Chispitas Nutricionales	Nutritional Sprinkles
	Dominican Republic	Chispitas Solidarias	Solidarity Sprinkles
	Guatemala	Macrovital	-
	Guatemala	Chispitas	Little sprinkles
	Indonesia	Taburia	You sprinkle it and you are happy
	Kyrgyzstan	Gulazyk	Ancient dried food of Kyrgyz nomadic people
	Lao PDR	Foon vitamin Lae Keua Hae	Vitamin and mineral powder
	Madagascar	Bo Fanjaka	Powder for strength and vitality
	Mongolia	Olon nairlagat bichil tejeeliin holimog	Multiple micronutrient powder
	Nepal	Baal Vita	Vitamins for children
	Nepal	Vita Mishran	Mixture of vitamins
	Peru	Chispitas	Sprinkles
	Peru	Estrellitas nutricionales	Nutritional sprinkles
	Uruguay	Chispitas	Sprinkles
MNP Planned Interventions	Afghanistan	Zwak/Powder-e-Quwat	Powder of Strength
	Bangladesh	Monomix	A mix for your darling baby
	Colombia	Chispitas nutricionales	Nutritional sprinkles
	Indonesia	Tabir Gizi Vitamin dan mineral	Vitamin and Mineral Sprinkles
	Philippines	Vita Nutrient Mix	-
	Uzbekistan	Kuvatjon	Power/strength (affectionate diminutive)
CFS Implemented Interventions	Botswana	Tsabana	For Children
	Botswana	Malutu	For Children
	Madagascar	BO Salama	Powder for health
	Madagascar	Koba Aina	Flour of life
	Burkina Faso	Dayeri N'ni Yoma	Complement for household flour
	Burkina Faso	Ninpiendi	Complement for flour
	Cote d' Ivoire	Farinor	-
	China	Yu Er Bao	Nutrients package

[a] No local names were reported for LNS interventions