



Food and Agriculture
Organization of the
United Nations

IMPROVING COMPLEMENTARY FEEDING IN MALAWI

Lessons learned from a
Process review of a food security and nutrition project



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Food and Agriculture Organization of the United Nations
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This study was initiated by Ms Ellen Muehlhoff, Team Leader of the Nutrition Education and Consumer Awareness Group in the Nutrition Division, with the aim of developing lessons learned to inform food security and nutrition education programming and policy development.

Dr Elizabeth Westaway, FAO International Nutrition Consultant, was the primary investigator of the process review, who facilitated the study in Malawi.

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This report was written by Dr Elizabeth Westaway, Ms Julia Garz and Ms Stacia Nordin and finalized by Ms Ellen Muehlhoff and Esther Evang.

Acronyms

AEDC	Agricultural Extension Development Coordinator
AEDO	Agricultural Extension Development Officer
AEHO	Assistant Environmental Health Officer
BCC	Behaviour Change Communication
CHV	Community Health Volunteer
CNP	Community Nutrition Promoter
DADO	District Agricultural Development Officer
DAES	Department of Agricultural Extension Services
DEC	District Executive Committee
DNCC	District Nutrition Coordination Committee
DNHA	Department of Nutrition, HIV and AIDS
DSA	Daily Subsistence Allowance
EHO	Environmental Health Officer
EPA	Extension Planning Area
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FGD	Focus Group Discussion
FICA	Former name for the Government of Flanders' Development Cooperation: Flanders International Cooperation Agency
FNO	Food and Nutrition Officer
HSA	Health Surveillance Assistant
IEC	Information, Education and Communication
IFSN	Improving food security and nutrition policies and programme outreach
IMCF	Improving the dietary intakes and nutritional status of infants and young children through improved food security and complementary feeding counselling
IYCF	Infant and Young Child Feeding
JFFLS	Junior Farmer Field and Life School
JLU	Justus Liebig University (Giessen, Germany)
LUANAR	Lilongwe University of Agriculture and Natural Resources
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MoEST	Ministry of Education, Science and Technology
MoGCDSW	Ministry of Gender, Children, Disability and Social Welfare
MoH	Ministry of Health
MoLGRD	Ministry of Local Government and Rural Development
NGO	Non-Governmental Organization
OPC	Office of the President and Cabinet
SUN	Scaling Up Nutrition
TIPs	Trials of Improved Practices
ToT	Training of Trainers or Trainers of Trainers

Executive summary

The Food and Agriculture Organization of the United Nations (FAO) in Malawi supported a 7-year project entitled: “Improving food security and nutrition policies and programme outreach” (IFSN) (2008–2015) with funding from the Government of Flanders. The focus of this report is on Phase two of the project, which increased the emphasis on nutrition from 2011–2015. The Malawi IFSN project was one of two FAO food security and nutrition projects (the other in Cambodia) with the aim of improving Infant and Young Child Feeding (IYCF) practices, particularly complementary feeding, and family diets using locally available foods. There is increasing interest in integrated agriculture-nutrition interventions by various agencies, including governments, bilateral development, UN agencies and Non-Governmental Organisations (NGOs). Although there are general recommendations on how to achieve these linkages in programmes, there is a dearth of more specific lessons and guidance for agriculture and food security programmes that focus on IYCF, particularly complementary feeding.

Parallel to the IFSN project, a 5-year research project entitled: “Improving the dietary intakes and nutritional status of infants and young children through improved food security and complementary feeding counselling” (IMCF) (2010–2015) was implemented by Justus Liebig University (JLU) Giessen, Germany and Lilongwe University of Agriculture and Natural Resources (LUANAR), Malawi, with support from FAO and funding from the German Federal Ministry of Food and Agriculture (BMEL). IMCF aimed to assess the effectiveness of the IFSN project activities on children’s dietary intake, micronutrient status and growth, and to determine the nutrition outcomes of combining agricultural production and nutrition education.

A process review of the IFSN project¹ was conducted during September–October 2014 with

the aim of providing answers to a number of questions related to project implementation. The objectives were to: (1) collect data on the nutrition education component of the IFSN project, and the linkages between the food security and nutrition education components in order to establish what had and had not worked well; (2) identify best practices; and (3) develop lessons learned to inform future programme and policy development. The process review was intended to complement the quantitative and qualitative research findings of the IMCF project and enhance our understanding of integrated agriculture-nutrition interventions.

In Malawi, chronic undernutrition continues to be a major problem (47.1 percent of children under five are stunted), with implications for future population health and development. Underlying causes of undernutrition, particularly stunting, include: food insecurity, poor caring practices (inadequate breastfeeding, complementary feeding, dietary diversity) and unhealthy lifestyles and environment (diseases, poor water, sanitation and hygiene) with actions needed across a wide variety of sectors (agriculture, health, gender, economics and environment) to improve awareness, knowledge and skills among service providers, parents or caregivers and other family members. The first 1 000 days of life provide a “window of opportunity” to resolve these issues and prevent stunting; ensuring that children can develop their full potential through: exclusive breastfeeding for the first 6 months; continued breastfeeding up to 2 years of age; appropriate complementary feeding from 6–23 months; and healthy lifestyles and living conditions. In order to reduce undernutrition in Malawi, there is a need for effective nutrition interventions, particularly with regard to integrated food security and nutrition education.

Phase two of the IFSN project commenced in April 2011 and closed in March 2015 with a three

¹ A similar process review was conducted in the FAO food security and nutrition project in Cambodia, and general programming lessons for programme managers will be developed following the FAO/JLU Technical meeting “Linking agriculture and nutrition education for improved young child feeding,” which was held at FAO headquarters, Rome, Italy on 6–8 July 2015.

month no-cost extension for nutrition support until 30 June 2015. Five Government Ministries were supported to implement the IFSN project: the Ministry of Agriculture, Irrigation and Water Development (MoAIWD), specifically the Department of Agricultural Extension Services (DAES); the Ministry of Health (MoH); the Office of the President and Cabinet's Department of Nutrition, HIV and AIDS (OPC DNHA); the Ministry of Local Government and Rural Development (MoLGRD); and the Ministry of Gender, Children, Disability and Social Welfare (MoGCDSW), with MoAIWD having overall implementation and coordination responsibility.

The overall objective of the IFSN project was to contribute through policy and programme advisory services to the achievement of the government's development goals in terms of improving the food security and nutrition situation of the Malawian population. This was done through work at the national level on policy and programming support as well as by providing support to district grass-roots interventions. Phase two of the IFSN project (2011–2015) targeted approximately 42 000 farmers in vulnerable rural households and 3 300 school children in six Extension Planning Areas (EPAs)² in Kasungu and Mzimba Districts, and adopted a more participatory and integrated approach to improve food security and nutrition through capacity building with an array of micro-projects and educational/training programmes. Of these farmers, approximately 12 000 were supported with IYCF nutrition education.

The nutrition education component tried to integrate improvements within the farming systems and comprised several community-based interventions: IYCF nutrition education to teach groups of 15 caregivers with children aged 6–18 months improved IYCF practices through the promotion of nutritious recipes for complementary food using locally available foods in a course of IYCF nutrition education sessions and participatory cooking sessions; and nutrition education sessions in Farmer Field Schools (FFS) and Junior Farmer Field and Life Schools (JFFLS). The main service providers for nutrition were government front line extension staff and

Community Nutrition Promoters (CNPs) from agriculture (Lead Farmers) and health (Community Health Volunteers, CHVs). FAO project staff provided guidance, support and monitoring, and additional training was provided by other development partners working in the relevant districts.

The process review involved primary data collection in Malawi and a review of secondary data sources undertaken at FAO headquarters. Within the two districts, EPAs were purposively selected and IYCF villages randomly selected for the study. Questions for individual interviews and focus group discussions (FGDs) with different stakeholders at all levels (community, extension services, extension supervisors, district, divisions and national) related to agriculture-nutrition linkages, the nutrition education component, involvement of government staff, socio-cultural issues related to care and feeding of young children, and sustainability and scale up.

Findings covered the following key themes: (1) IYCF nutrition education intervention; (2) family environment (3) nutrition and food security linkages; and (4) supporting existing delivery mechanisms for sustainability and scale up.

Key lessons learned focused on challenges and successes of the IFSN project. Challenges included: (i) targeting; (ii) coordination/collaboration; (iii) capacity building/training; (iv) implementation; (v) supervision, monitoring and reporting; (vi) behaviour change at the household level; and (vii) sustainability and scale up. With regard to capacity building/training, these involved: disruption caused by Daily Subsistence Allowances (DSAs); CNP trainings not tailored to community level adult learning requirements; limited assessment of pre-/post-training knowledge scores; and inadequate CNP facilitation skills.

Successes included: (i) a strong partnership with the government; (ii) Information, Education and Communication (IEC) materials; (iii) IYCF capacity building; (iv) creating a gender-sensitive learning environment; (v) inclusion of grandmothers; and (vi) providing a practical learning environment. In

² Phase two of the IFSN project was implemented in three EPAs in Kasungu District and three EPAs in Mzimba District.

terms of IYCF capacity building being a success, cross-sectoral trainings were held with staff in agriculture and health at different levels to support the implementation of the IYCF nutrition education intervention.

A number of recommendations were highlighted, based on lessons learned, to ensure effective linking of agriculture and nutrition education to improve the nutrition outcomes of young children and their families: (i) Consider the complexity of the socio-cultural context when designing/implementing projects and include all family members; (ii) Advocate for food-based and dietary approaches that are possible and feasible, and can make a difference with appropriate support; (iii) Step-up advocacy and sensitization of government, front line extension staff, local leaders and community members to encourage participation, ownership and empowerment; (iv) Develop a comprehensive, continuous food-based nutrition training system for agriculture, health and community development extension systems, and primary and secondary education systems; (v) Provide timely, nutritionally-

appropriate agricultural support to families with young children; (vi) Strengthen the role of the District Nutrition Coordination Committee (DNCC) and District Executive Committee (DEC) in nutrition advocacy and to create a strong platform for nutrition; (vii) Improve IYCF nutrition education sessions focusing on food-based approaches and local foods, so that they meet specific learning needs of different levels, complement other community activities and are periodically upgraded; (viii) Provide participatory community-based IYCF nutrition education that offers opportunities for practical learning, to ensure behaviour change; (ix) Include recipes for improved family meals to strengthen overall family nutrition education; (x) Revisit the Farm Home Assistant concept at EPA level to bring nutrition capacity closer to the community level; (xi) Review, clarify and organize projects to better support and streamline the workload of government staff, and provide all the necessary resources and tools; (xii) Review DSA and external incentive regulations for rural sites, which all development partners adhere to.



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1 Introduction

1.1 Objectives of the process review

The Food and Agriculture Organization of the United Nations (FAO) in Malawi supported a 7-year project entitled: “Improving Food Security and Nutrition Policy and Programme Outreach” (IFSN) (2008–2015) with funding from the Government of Flanders.³ The focus of this report is on Phase two of the project, which increased the emphasis on nutrition from 2011–2015. The Malawi IFSN project was one of two recent FAO food security and nutrition projects⁴ with the aim of improving Infant and Young Child Feeding (IYCF) practices, particularly complementary feeding, and family diets using locally available foods. There is increasing interest in integrated agriculture-nutrition interventions by various agencies including governments, bilateral development, UN agencies and Non-Governmental Organizations (NGOs). Although there are general recommendations on how to achieve these linkages in programmes, there is a dearth of more specific lessons and guidance for agriculture and food security programmes that focus on IYCF, particularly complementary feeding.

Parallel to the IFSN project, a 5-year research project entitled: “Improving the dietary intakes

and nutritional status of infants and young children through improved food security and complementary feeding counselling” (IMCF) (2010–2015) was implemented by Justus Liebig University (JLU) Giessen, Germany and Lilongwe University of Agriculture and Natural Resources (LUANAR), Malawi, with support from FAO and funding from the German Federal Ministry of Food and Agriculture (BMEL). IMCF aimed to assess the effectiveness of the IFSN project activities on children’s dietary intake, micronutrient status and growth, and to determine the nutrition outcomes of combining agricultural production and nutrition education.

A process review of the IFSN project was conducted during September–October 2014 with the aim of providing answers to a number of questions that related to project implementation. Questions focused on the following issues: targeting families with young children with agriculture support; implementing nutrition education activities supporting existing government extension services; training and capacity development of trainers; underlying socio-cultural issues related to childcare and feeding; and sustainability and scale up of such interventions.

³ During the IFSN project, the Flanders International Cooperation Agency (FICA) was dissolved and absorbed into the Government of Flanders.

⁴ The FAO food security project entitled: “Improving Food Security and Market Linkages for Smallholders in Oddar Meanchey and Preah Vihear” (MALIS) (2012–2015) was implemented in Cambodia and funded by the European Union (EU).

The process review objectives were to:

1. Collect data on the nutrition education component of the IFSN project and the linkages between the food security and nutrition education components
2. Compile case study material on what had and had not worked well
3. Identify best practices and develop lessons learned to inform future programme and policy development

The process review was intended to complement the quantitative and qualitative research findings of the IMCF project and enhance our understanding of integrated agriculture-nutrition interventions.

This report focuses on the IYCF nutrition education sessions with caregivers of young children aged 6–23 months, which aimed to improve complementary feeding using locally available foods.

Lessons learned related to other components of the IFSN project were not included in the process review and considered beyond the scope of this report. Lessons learned on the IYCF nutrition education intervention were presented at a district level dissemination meeting held in Mzimba on 13 February 2015 (participants were from both districts and all levels of district implementation) and a national dissemination meeting in Lilongwe on 18 February 2015, in which representatives from both districts and divisions also participated.

A similar process review was conducted on the FAO food security and nutrition education project in Cambodia.⁵ General programming lessons for programme managers will be developed following the FAO/JLU Technical meeting “Linking Agriculture and nutrition education for improved young child feeding,” which was held at FAO headquarters, Rome, Italy on 6–8 July 2015.⁶

⁵ The MALIS project process review report was released in December 2015.

⁶ The report of the FAO/JLU technical meeting is forthcoming.



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2 Background

This section provides a summary of the IMCF research project, which is an evaluation of the IFSN project; an overview of the food security and nutrition context in Malawi; and a description of the IFSN project.

2.1 Evaluation through independent research – the IMCF project

The impetus for the IMCF project in Malawi and Cambodia was the lack of evidence on the effectiveness of combining food security and nutrition education interventions on young children's nutrition; particularly how integrated agriculture-nutrition interventions might improve access to nutrient-dense complementary foods and promote their consumption, and increase the adoption of appropriate IYCF practices among caregivers of young children. Hence, the IMCF project objectives were to document the effectiveness of promoting locally available and affordable complementary foods to improve infant and young children's nutritional status. The IMCF research component tested the following hypotheses:

1. Trials of Improved Practices (TIPs) generate behaviour change communication (BCC) messages and nutritionally improved recipes that lead to lasting improvements in complementary feeding practices, dietary intakes and child nutritional status.
2. Locally available and affordable foods can provide a significant contribution to the nutritional requirements of children aged 6–23 months.
3. Nutrition education with a focus on IYCF and linked with a food security intervention can improve child feeding practices and nutritional status.
4. Using locally available foods for improving complementary feeding practices and children's nutritional status is a sustainable strategy, which can be replicated by households at low cost and taken to scale using available government services.

The IMCF project commenced in November 2010 and will close in January 2016. Research activities began with baseline surveys in households with children under 2 years of age, conducted in Malawi in August 2011 and in Cambodia in September 2012. Clusters were subsequently randomized to either intervention (six in Malawi, ten in Cambodia) or comparison groups (six in Malawi, five in Cambodia). In intervention clusters, caregivers in households with children under 2 years of age participated in nutrition education related to complementary feeding. Longitudinal studies of small cohorts of children were undertaken in both countries, a cross-sectional mid-term survey was carried out in Malawi two years after collection of baseline data, and impact surveys were conducted in 2014, first in Malawi in August and then Cambodia in September.

Research activities also comprised focus group discussions (FGDs), in-depth interviews, and pre- and post-training tests to assess participant knowledge as well as observations among spouses, grandmothers and health professionals. In both countries, observations took place of training of trainers (ToT) and volunteer Community Nutrition Promoters (CNPs), and IYCF nutrition education sessions. Home visits were also undertaken to observe the preparation of porridges for young children.

2.2 Food security and nutrition situation in Malawi

In Malawi, agriculture production is predominately subsistence and dominated by maize with 80–90 percent of smallholder's cropping area devoted to maize.^{7, 8} The *Welfare monitoring survey 2014*⁹ found that 68.9 percent of households grew maize and that 86.7 percent of households ate grain products daily. This is likely to be largely maize as an IFPRI study,¹⁰ which evaluated household expenditure survey data to measure changes in nutrition outcomes between 2004–2005¹¹ and 2010–2011,¹² found that 66.3 percent of calories are from maize, with very few calories from other cereals/grains (3.6 percent). Hence, food security is commonly interpreted as “maize security”. In Malawi, nutrition is seen as a means to improve economic development (Malawi Agricultural Sector Wide Approach (ASWAp)¹³), as malnutrition is one of the major factors adversely contributing to low

human capacity development and economic growth in the country.

The Department of Nutrition, HIV and AIDS (DNHA) was established in 2004 in the Office of the President and Cabinet (OPC) to coordinate united actions. In 2014, the department was moved to the Ministry of Health (MoH) despite concerns that a sectoral ministry would find it difficult to conduct high level coordination with other sectors and that nutrition would be primarily linked to medical interventions instead of food. Previously in the 1990s, nutrition was coordinated from Economic Planning and Development with nutritionists implementing actions in Agriculture, Health, Gender and Community Development ministries. Malawi followed a national action plan for nutrition until 2007 when the first National Nutrition Policy and Strategic Plan was endorsed and expanded implementation to ten sectors, including Local Government and Rural Development; Education, Science and Technology; Natural Resources and Environment; among others. The policy and strategy were revised in 2014, though still in draft form. Despite the need for greater food security and nutrition, the Government of Malawi has been slow to prioritize nutrition in national budgets.

Underlying causes of undernutrition, particularly stunting, include: food insecurity, poor caring practices (inadequate breastfeeding, complementary feeding, dietary diversity) and unhealthy lifestyles and environment (diseases, poor water, sanitation and hygiene) with actions

⁷ FAO. 2008. *Nutrition Country Profile: Republic of Malawi*. Rome: FAO.

⁸ International Fund for Agricultural Development. 2011. *Republic of Malawi sustainable agricultural production programme: programme design report. Main report and annexes*. Rome, IFAD.

⁹ National Statistical Office. 2015. *Welfare monitoring survey 2014*. Zomba, Malawi, NSO (available at www.nsomalawi.mw/home/5-report/220-welfare-monitoring-survey-wms-2014.html).

¹⁰ Verduzco-Gallo, I., Ecker, O. & Pauw, K. 2014. *Changes in food and nutrition security in Malawi analysis of recent survey evidence, Malawi strategy support program*. Working paper 06. Washington, DC, IFPRI (available at www.ifpri.org/publication/changes-food-and-nutrition-security-malawi-analysis-recent-survey-evidence).

¹¹ National Statistical Office. 2005. *Integrated household survey 2004-2005 (IHS2). Household socio-economic characteristics*. Zomba, Malawi, NSO (available at www.nsomalawi.mw/images/stories/data_on_line/economics/ihs/IHS2/IHS2_Report.pdf).

¹² National Statistical Office. 2012. *Integrated household survey 2010-2011 (IHS3). Household socio-economic characteristics report*. Zomba, Malawi, NSO (available at www.nsomalawi.mw/images/stories/data_on_line/economics/ihs/IHS3/IHS3_Report.pdf).

¹³ MoAIWD. 2011. *Malawi agricultural sector wide approach. A prioritised and harmonised agricultural development agenda 2011-2015*. Lilongwe, MoAIWD (available at <ftp://ftp.fao.org/tc/tca/CAADP%20TT/CAADP%20Implementation/CAADP%20Post-Compact/Investment%20Plans/National%20Agricultural%20Investment%20Plans/Malawi%20Post%20Compact%20Investment%20Plan.pdf>).

needed across a wide variety of sectors (agriculture, health, gender, economics and environment) to improve awareness, knowledge and skills among service providers, parents or caregivers and other family members. The first 1 000 days of life provide a “window of opportunity” to resolve these issues and prevent stunting; ensuring that children can develop their full potential through: exclusive breastfeeding for the first 6 months; continued breastfeeding up to 2 years of age; appropriate complementary feeding from 6–23 months; and healthy lifestyles and living conditions. In order to reduce undernutrition in Malawi, there is a need for effective nutrition interventions, particularly with regard to integrated food security and nutrition education.

Stunting is a major contributor to Malawi’s ill-health outcomes and an underlying cause of high infant and child morbidity and mortality rates. Despite years of development assistance, Malawi continues to struggle with extremely high and persistent rates of stunting. According to the IFSN project baseline survey¹⁴ conducted in June/August 2008 (N=896 households), the majority of rural households in Kasungu and Mzimba Districts were poor, food insecure and depended on low-productivity and maize-dominated farming systems; had limited productive capacity and access to resources, such as high quality seed and animal breeds, irrigation technologies, credit, extension services and other inputs; and had fragile community organizations to steer and sustain development initiatives at community level. The IMCF project baseline survey¹⁵ conducted in August/September 2011 (N=1 041 households) found that stunting prevalence was 39.2 percent among children aged 0–23 months. In addition, 48.5 percent of children aged 6–23 months achieved a Minimum

Acceptable Diet, 60.9 percent Minimum Dietary Diversity and 74.2 percent Minimum Meal Frequency. Children’s diets were dominated with foods from the staple food groups (primarily grains) and generally low in animal-source foods. The Malawi demographic and health survey 2010 (MDHS)¹⁶ reported that 47.1 percent of children under the age of five were stunted, and the *MDG endline survey 2014* found that 42.4 percent were stunted.¹⁷ Malawi was an “early riser country,” being one of the first group of countries to join the Scaling Up Nutrition (SUN) Movement shortly after it was announced in 2010. In 2011, the National Nutrition Education and Communication Strategy (NECS) was finalized and commenced in 18 of Malawi’s 28 districts by 2014. NECS focuses particularly on prevention of stunting and is aligned to a national campaign “1 000 Special Days”¹⁸ with outreach to many different sectors of the population emphasizing the ways in which they can contribute to stunting prevention.

2.3 Description of the IFSN project

The IFSN project, funded by the Government of Flanders, commenced in April 2011 and closed in March 2015 with a three month no-cost extension for nutrition support until 30 June 2015.

Five Government Ministries were supported to implement the IFSN project: the Ministry of Agriculture, Irrigation and Water Development (MoAIWD), specifically the DAES; MoH; OPC DNHA;¹⁹ the Ministry of Local Government and Rural Development (MoLGRD); and the Ministry of Gender, Children, Disability and Social Welfare (MoGCDSW), with MoAIWD having overall implementation and coordination responsibility.

¹⁴ Mkamanga, G. 2009. *Improving food security and nutrition policies and programme outreach. Socio-economic baseline survey results in Kasungu and Mzimba impact areas*. Vol. 1, Final narrative report. Lilongwe, Gil Enterprise Consultants.

¹⁵ Kuchenbecker, J., Jordan, I., Kalagho, K.G., Chiutsi-Phiri, G., Mtimuni, B. & Krawinkel, M.B. 2012. *IMCF Malawi, cross-sectional nutrition baseline survey August/September 2011 report*, Faculty 09, unpublished. Giessen, Germany, Agricultural and Nutritional Sciences and Environment Management, Justus Liebig University Giessen.

¹⁶ National Statistical Office & ICF Macro. 2011. *Malawi demographic and health survey 2010*. Zomba, Malawi and Calverton, USA, NSO and ICF Macro (available at <https://dhsprogram.com/pubs/pdf/FR247/FR247.pdf>).

¹⁷ National Statistical Office. 2015. *Malawi MDG Endline Survey 2014*. Zomba, Malawi, NSO. (available at www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf).

¹⁸ “1 000 Special Days” are the 270 days of pregnancy plus 730 days for the first two years of a child’s life.

¹⁹ In July 2014, DNHA was moved to MoH.

The overall objective of the IFSN project was to contribute through policy and programme advisory services to the achievement of the government's development goals in terms of improving the food security and nutrition situation of the Malawian population. This was done through work at the national level on policy and programming support as well as by providing support to district grass-roots interventions. The expected output of the project was that the capability of target households be strengthened to the extent that they can meet their needs in terms of food security and nutrition.

The IFSN project adopted a more participatory and integrated approach to improve food security and nutrition through capacity building with an array of micro-projects and educational/training programmes. Project activities were designed to benefit households with the following vulnerability selection criteria: extremely poor; child or female-headed; caring for orphans; caring for people living with HIV or other chronic diseases; widows and elderly people living on their own; pregnant women; and children under 2 years of age.

The IFSN project²⁰ ran from 2008–2015 in two phases and was implemented in 12 Extension Planning Areas (EPAs) of Kasungu and Mzimba Districts (six in Phase one and six new EPAs in Phase two).

Phase one (2008–2011): supported a total of 29 000 farmers covering approximately half of the EPAs in each district. Each farmer received one year of support, meaning that each year 9 000–10 000 farmers in a particular area received support. The focus was primarily on drought recovery and inputs supply with very little nutrition. For approximately two years during this phase, a Nutrition Advisor²¹ worked with OPC DNHA on nutrition policy, assessing and

building nutrition capacity, and with MoAIWD on integrating nutrition into agriculture sector policy.

Phase two (2011–2015): supported a total of 42 000 farmers in vulnerable households and 3 300 school children in the same two Districts, but covering new EPAs, resulting in almost all EPAs of the districts being covered by the end of the project. Each farmer again received one year of support, but it was focused more towards food security skills and knowledge, nutrition education and farmer groups. Of these farmers, approximately 12 000 were supported with IYCF nutrition education. To organize the project's support, the three EPAs were further sub-divided into three Rounds of villages, with each Round receiving approximately one year of food security support (with nutrition integration through Farmer Field Schools (FFS) and Junior Farmer Field and Life Schools (JFFLS)), then one year of IYCF support, starting approximately six months after the food security support.²² Hence, three Rounds of support were provided in Phase two. In addition, the plan for Phase two was to harmonize the food security and nutrition education components and conduct two IYCF care groups each year per Round.

The IMCF research component only took place in Round one IYCF villages. From October 2011–July 2012, TIPs were conducted by government front line extension staff from the agriculture and health sectors to evaluate the acceptability and feasibility of complementary feeding recommendations and recipes using locally available and affordable foods. The results provided insights on how to promote and support adoption of improved practices on a larger scale and were used to design the IFSN IYCF nutrition education intervention. During the last two years of Phase two, a Nutrition Policy Advisor²³ (the FAO Nutrition Officer (Food Security and Policy))

²⁰ The IFSN project was implemented in two phases over a period of seven years. In Phase one (2008–2011), three EPAs were targeted in Kasungu District (Kasungu Chipala, Lisasadzi and Santhe) and Mzimba District (Emfeni, Luwerezzi and Vibangalala), and in Phase two (2011–2015), three new EPAs were targeted in Kasungu District (Chulu, Kaluluma and Mkanakhoti) and in Mzimba District (Champhira, Khosolo and Mbawa). Food security and nutrition components targeted the same EPAs, but were not always able to target the same households.

²¹ During Phase one, Ms Ruth Butao-Ayode was employed as the FAO Nutrition Advisor.

²² One year of IYCF support started approximately 6 months after the food security support, i.e. June/July targeting; August/September start of food security intervention; February/March start of IYCF nutrition education intervention.

²³ Ms Stacia Nordin was employed as the FAO Nutrition Officer (Food Security and Policy) in Lilongwe from November 2012–June 2015. She was usually referred to as the Nutrition Policy Advisor (NPA).

worked with MoAIWD DAES to build on the previous agriculture and nutrition policy and programmes.

The food security component interventions included: FFS; JFFLS; diversified agriculture; provision of inputs; income-generating activities; environment, soil and water conservation; water and sanitation; and capacity building. The main service provider was the government front line extension staff and Lead Farmers through FFS and teachers through JFFLS to ensure sustainability.

The nutrition education component tried to integrate improvements within the farming systems and comprised several community-

based interventions: IYCF nutrition education to teach groups of 15 caregivers with children aged 6–18 months improved IYCF practices through the promotion of nutritious recipes for complementary food using locally available foods in a course of IYCF nutrition education sessions and participatory cooking sessions; and nutrition education sessions in FFS and JFFLS. The main service providers for nutrition were government front line extension staff and CNPs from agriculture (Lead Farmers) and health (CHVs). FAO project staff provided guidance, support and monitoring, and additional training was provided by other development partners working in the relevant districts.



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3 Methodology

This section provides a description of the process review data collection methods, data processing, analysis and limitations.

3.1 Key informant interviews, focus group discussions, review

The process review was conducted by FAO Malawi and headquarters nutrition staff from 14 September–10 October 2014.²⁴ The process review involved primary data collection in Malawi and a review of secondary data sources at FAO headquarters.

Planning meetings with IFSN staff at national and district levels in Malawi led to the selection of participants²⁵ at household, community, district and national levels (Annex 1), and considered the different implementation Rounds²⁶ during Phase two of the IFSN project.

The 61 initial questions generated for the MALIS process review in Cambodia that related to agriculture-nutrition linkages, the nutrition education component, involvement of government staff, socio-cultural factors related to care and feeding of young children, and sustainability and scale up were adapted for the Malawi context, and bespoke questionnaires

developed for individual interviews and FGDs with different stakeholders.

In total, 22 interviews, 14 FGDs and six household visits²⁷ were carried out with different participants in Malawi (Table 1, page 9). An overview of the data collection schedule is provided (Annex 2).

The review of secondary data sources included: six-monthly donor reports, meeting reports, monitoring data and other information.

3.2 Data processing, analysis and limitations

Primary data was collected in *Chichewa*, *Chitumbuka* or English. All interviews, FGDs and home visits were audiotaped (after the participants gave their verbal consent) and written notes were taken concurrently by the interviewer as a backup. Audiotapes were transcribed verbatim and translated into English by a team of four Research Assistants in Lilongwe. After which a thematic analysis was undertaken by Ms Julia Garz, FAO Junior Nutrition Consultant at FAO headquarters using OpenCode 4 software.

The main limitations of the process review were: (i) the capacity of IFSN staff to undertake qualitative data collection and processing; (ii) the language barrier, which led to many of the FGDs

²⁴ Data collection was ongoing when Dr Elizabeth Westaway left Malawi on 10 October 2014.

²⁵ EPAs in Kasungu and Mzimba Districts were purposively selected and IYCF villages were randomly selected.

²⁶ Phase two of the IFSN project involved three implementation Rounds; however, the process review only included participants from Round one and two, owing to the late start of IYCF nutrition education intervention in Round three.

²⁷ Household visits involved individual interviews with primary caregivers (mothers) and household observations.

and interviews being conducted post-saturation, that were transcribed and translated; (iii) few experienced transcribers fluent in *Chichewa*, *Chitumbuka* and English; (iv) delays in transcription and translation of FGD and interview audiotapes; and (v) data collection was conducted in the border area of Kasungu and Mzimba where tribes had similar cultures and traditions, although inter-district differences were anticipated.

Table 1: Methods used with different participants during the process review

Method	Participants
22 Interviews	<ul style="list-style-type: none"> • IFSN project staff • Different cadres of agriculture, health and education government staff at national, agricultural development division (ADD), district and EPA levels • NGO staff (MALEZA²⁹ and Feed the Children) • JFFLS facilitator (primary school teacher)
14 Focus Group Discussions	<ul style="list-style-type: none"> • Mothers, husbands, grandmothers • CNPs • Village heads • Agriculture and health front line extension staff • JFFLS learners • Nutrition focal persons in MoAIWD, MoH, OPC DNHA²⁸
6 Household visits	<ul style="list-style-type: none"> • Mothers²⁹
Secondary data review	<ul style="list-style-type: none"> • Donor reports • Six-monthly IFSN reports and progress reports • IMCF baseline and mid-term surveys reports

²⁸ Nutrition focal persons in MoAIWD, MoH and OPC DNHA participated in a meeting entitled: “Sustainably Scaling Up an Integrated Agriculture-Nutrition programme” held on 9 October 2014 in Lilongwe.

²⁹ Mothers had their young children with them and often their mother-in-law was also present during the interview.



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4 Discussion of findings

In order to understand the relevance of the process review findings to the progression of the IFSN project, where necessary, this section provides descriptions of the different elements of the food security and nutrition education components as background information. Process review findings are presented on the following key themes: (i) IYCF nutrition education intervention; (ii) family environment; (iii) nutrition and food security linkages; and (iv) supporting existing delivery mechanisms to scale up improved complementary feeding of young children.

4.1 IYCF nutrition education intervention

This section focuses on the different elements of the IYCF nutrition education intervention and highlights issues related to building capacity of the different government staff from all levels and community members, along with its implementation (Figure 1).

4.1.1 Formative research

Trials of Improved Practices (TIPs) is a consultative research technique which aims to identify the individual, cultural and environmental barriers that prevent and facilitate optimal behaviours, and uses this information to craft targeted strategies to promote positive behaviour change.

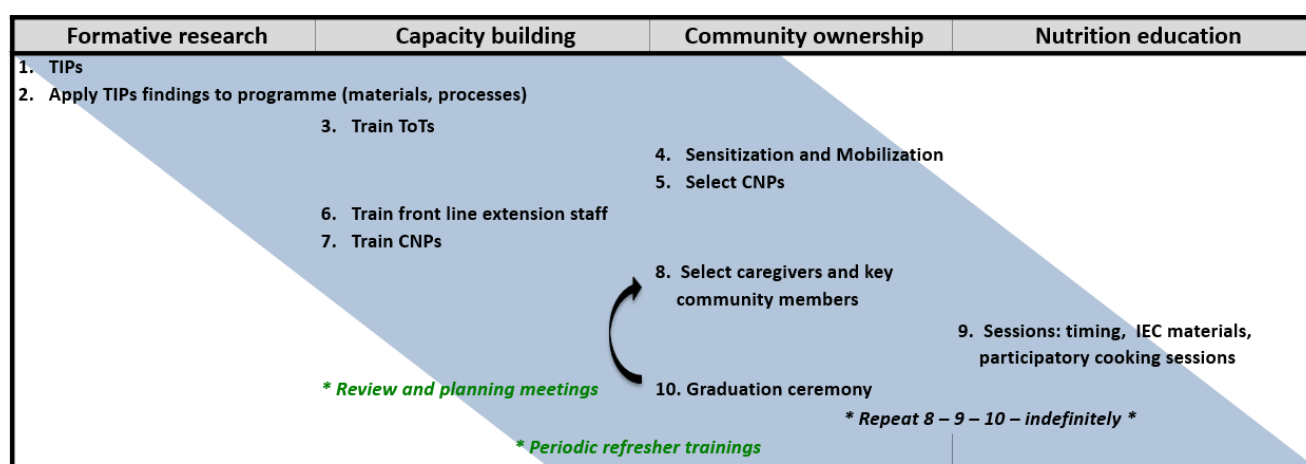


Figure 1: Implementation of the IYCF Nutrition Education Intervention

In 2011–2012,³⁰ the IFSN project conducted TIPs³¹ in a sample of 100 vulnerable rural households in the six Phase two EPAs of Kasungu and Mzimba Districts. TIPs was used to test the acceptability and feasibility of complementary feeding recipes, and involved families in making the best possible use of locally available resources for improved child feeding, with an emphasis on animal-source foods, fruit, oil and vegetables. The key message was that diversified and improved diets containing locally available foods in combination with good health practices (hygiene, sanitation, early detection of and appropriate response to illness, etc.) can improve the nutritional status of children under 2 years of age. Verified recipes and behaviour change messages were developed into information, education and communication (IEC) materials (*Nutrition Education*, page 18), and incorporated into the nutrition education component's IYCF nutrition education intervention.

4.1.2 Capacity building and community engagement cascade

Within the IYCF nutrition education intervention, capacity building was undertaken through the training cascade, which comprised training for: (i) ToTs; (ii) 2-day sensitization with extension supervisors (Agricultural Extension Development Coordinators (AEDCs)/Assistant Environmental Health Officers (AEHOs)); (iii) front line extension staff (Agricultural Extension Development Officers (AEDOs)/Health Surveillance Assistants (HSAs)); (iv) CNPs; and (v) caregivers. This approach aimed to ensure that the capacity

building encompassed strong community engagement (Figure 2, page 12), and was fine-tuned over the course of Round one, two and three (Annexes 3, 4 and 5).

In Round one, FAO consultants³² selected the ToTs (who were then called Master Trainers (MTs)) and the number of supervisors to be sensitized and extension staff to be trained. Not all government staff in the chain of command were included in the project; however, a more inclusive approach was adopted in Round two.

In October–November 2012, nutritionists from MoAIWD and MoH conducted a 5-day ToT training with 20 multi-sectoral government staff³³ to provide them with the required knowledge and skills to carry out 8-day CNP and 2-day front line extension staff trainings, and half day sensitizations with traditional leaders on the IYCF nutrition education intervention. The 5-day ToT training focused on IYCF (four days on using the IYCF IEC materials³⁴ and one day on community mobilization and monitoring tools.³⁵ After which, TOTs were divided into pairs to conduct trainings for front line extension staff (AEDOs/HSAs).

In Round one, front line extension staff training lasted two days, but AEDOs and HSAs felt that the duration was insufficient to ensure that they were capable of supporting CNPs. Hence, in Round two, front line extension staff and CNPs were jointly trained for eight days.

³⁰ TIPs Round one was conducted immediately prior to and during the rainy season, when household food stocks became progressively lower (October 2011–January 2012); and Round two was conducted during harvest when food security and purchasing power were relatively high (May 2012–July 2012).

³¹ FAO. 2014. *What works at home? Improving complementary feeding based on locally available foods - learning from caregivers through trials of improved practices in Kasungu and Mzimba districts of Malawi*. Rome, FAO (available at www.fao.org/ag/humannutrition/43005-0217b833f79d8cd50e5dee498df36bffd.pdf).

³² During Round one, Ms Solange Heise, Ms Charity Dirorimwe, Ms Bertha Munthali and Ms Jane Sherman were employed as FAO Nutrition Consultants to assist FAO IFSN District Nutritionist Ms Rose Khan to support the government during the TIPs process into Round one. Ms Heise and Ms Munthali continued into Round two when Ms Stacia Nordin and Mr Lawrence Chakholoma joined FAO.

³³ The 20 government staff included Food Nutrition Officers (FNOs), AEDCs and AEDOs from MoAIWD and EHOs, AEHOs and HSAs from MoH. In total, 30 government staff were trained as ToTs: 20 in Round one and 10 were added in Round two to involve other sectors that were also included in SUN.

³⁴ See *Nutrition Education* on page 18 for a list of IEC materials.

³⁵ Guidance was provided for data collection, observation of sessions, monitoring report template and holding community sensitization meetings.

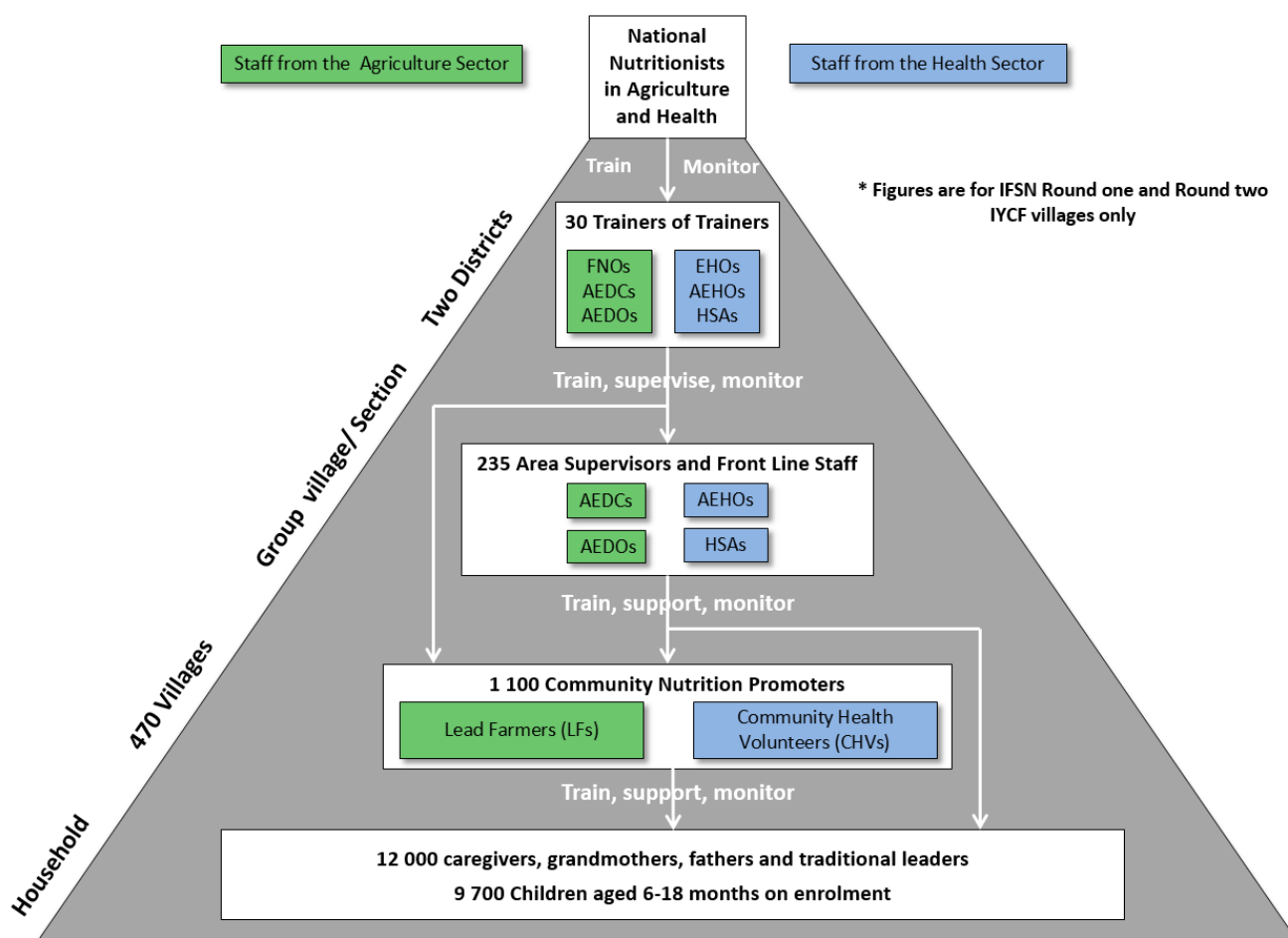


Figure 2: IYCF nutrition education intervention training cascade

Note: Food and Nutrition Officers (FNOs); Agricultural Extension Development Coordinators (AEDCs); Agricultural Extension Development Officers (AEDOs); Environmental Health Officers (EHOs); Assistant Environmental Health Officers (AEHOs); Health Surveillance Assistants (HSAs).

CNPs Intimidated by joint trainings: CNPs stated that they felt intimidated by the higher-level government staff and had difficulty in understanding the topics as readily as front line extension staff. Some CNPs reported their reluctance in asking questions to avoid revealing their lack of understanding, and extension staff suggested that separate trainings be conducted for front line extension staff and CNPs to ensure proactive participation.

4.1.3 Community ownership

This stage included a number of activities: a) community sensitization and mobilization; b) CNP selection and capacity building; c) selection of

caregivers; and d) inclusion of key community members.

Community sensitization and mobilization

ToTs sensitized and gained acceptance from all community, area and district leadership before starting the IYCF nutrition education intervention. AEDOs and HSAs also went into their communities and introduced the IYCF nutrition education intervention, including objectives and planned activities, and consulted Village Heads³⁶ for recommendations of suitable CNPs.

In order to effectively implement this activity, the buy-in of Village Heads was crucial. Hence,

³⁶ In Malawi, there are four levels of Traditional leadership: (i) Paramount Chiefs; (ii) Traditional Authorities (TA); (iii) Group Village Head (GVH), approximately 15 per TA; and (iv) Village Head or Chief, approximately 15 per GVH. The IFSN project worked with levels (ii)–(iv).

trained CNPs were requested to continue to brief their Village Heads on the IYCF nutrition education intervention, during which time they explained the purpose of the IYCF nutrition education sessions and reinforced the importance of husbands and grandmothers participation. Together with the Village Heads, they decided on a date to conduct the community mobilization, which was planned as an activity to introduce the IYCF nutrition education intervention to all community members.

Round one poor village heads sensitizations: In Round one, Village Heads sensitization and community mobilization was not effectively conducted. A FGD of Group Village Heads stated that they were sent a report about the IFSN project through the AEDC office and then called a meeting of Village Heads who organized meetings at the community level to brief each other and prepare for the programme. AEDOs also reported that at the beginning of the IFSN project, Village Heads were only sensitized on food security and there was no separate briefing on nutrition.

Improved round two improved village heads sensitizations: In Round two, the IFSN project made adaptations and improved village leader sensitization, and also developed a sensitization plan for all of the villages.³⁷ According to the FGD of Group Village Heads, they were satisfied with the sensitization/community mobilization process and greater buy-in had been achieved.

“[The FAO staff] brought some points that made sense and it looked very promising. They gave us a leading role in the programme and they ensured that we understood that the programme was fully meant for us. This was an achievement because we felt in control over things that happened in the programme. A man should not always receive things but on his own he has to work. That was a key because it emphasized that as they bring the

project, we should make contributions and own the project, they gave us tasks to do so we saw that this was a good plan. They taught us not to be always dependent but rather to rely on ourselves. So ... yeah ... I would say that they really taught us a lot before the programme was started. A drama was used to disseminate the message to us. It was very nice and there was laughter and a lot of people came to watch. [The] drama was the best. The meeting helped us in many ways ... starting from the selection of the right people to take responsibility of the programme. At first we chose people at random and without following the right criteria but this time around, it was easier. It was also easy to make people understand the goal of the programme because they had already been told and they saw how it begun. And people joined in large numbers without any problems ... so this made it easy for us to communicate to the people because they already knew about the programme.”

(Group Village Heads, FGD)

Training for village leaders and supervisors: A FGD with Group Village Heads revealed that they would have preferred a proper training on nutrition, so that they could oversee the work of the CNPs. Consequently, AEDOs felt that they did not receive any backstopping from the Group Village Heads or the AEDC,³⁸ despite them having attended the sensitization meetings, and thought that this process could be further improved by training selected village leaders.

“Group Village Heads should also be trained and sensitized because they are the custodians of the community. If we train the CNP and then he goes to the community and the group does not know him, it gets complicated. That CNP

³⁷ The sensitization plan for Round three was for AEDOs to first sensitize chiefs and then for the chiefs, CNPs and front line extension staff to go to the villages and sensitize the community.

³⁸ Extension supervisors (AEDCs/AEHOs) did not get the 8-day training; they were only sensitized for half a day in Round one and this was changed to two days in Round two and three.

will have problems in managing the community.”
(AEDOs, FGD)

CNP selection and capacity building

After ToTs sensitized communities to the IYCF nutrition education intervention, front line extension staff worked with communities to select skilled/hardworking CNPs. This aimed at community acceptance of the CNPs and to increase the likelihood of high quality IYCF nutrition education sessions being implemented. In each village, two CNPs were selected: one Lead Farmer and one CHV, although in most cases, both of these positions already existed.³⁹

In Round one and two, CNP training was conducted for a period of eight days and included participatory cooking sessions and home visits, and IEC materials were provided in the local languages (*Chichewa* and *Chitumbuka*). In order to meet the mobility needs of CNPs, their trainings were conducted in central places close to where they lived, such as in training centres located off the main tarmac roads.

In case of CNP drop out,⁴⁰ replacements had to be found and there was no clear volunteer replacement strategy. In some cases, caregivers who graduated from the IYCF nutrition education intervention or another interested community member took up the CNP role, learning skills from the trained CNP. This was corroborated by findings from CNP review and planning meetings.

“There is need to come up with well-defined criteria and sustainable replacement criteria for CNPs that have dropped or moved out of the village for various reasons. This will ensure sustained dissemination of improved IYCF practices.”
(IFSN District Nutritionist)

Village heads as CNPs: In some communities there was more than one Lead Farmer and CHVs

were not present in all villages. In these cases it was sometimes difficult to select a suitable person and Village Heads were likely to choose a family member, which would allow them to benefit from the allowances for trainings. In Round one, a Village Head reportedly took on the role of CHV, but caregivers were afraid of him and felt uncomfortable with the situation.

Unqualified CNPs: Several illiterate CNPs were chosen by Village Heads, as there was weak supervision of the selection process by extension staff; however, they were soon replaced and this led to a stronger emphasis being placed on the appropriate selection of CNPs for villages in Round two.

Inappropriate CNP training design: The CNP trainings were criticized for not being appropriately designed for adult learning requirements; particularly as CNPs were given insufficient time to learn and repeat what they had learned or to ask for clarification. Also, in Round two, there were no pre- and post-knowledge tests, and this prevented the identification of knowledge gaps.

Lack of amenities in rural training locations: Although rural trainings minimized transportation challenges for CNPs, the ToTs had to travel and stay at these locations, which they considered inadequate.

Female CNP attendance: Female CNPs often had difficulties justifying their participation in the training to their husbands, particularly when they received no remuneration. During the rainy season, females were expected to work in the fields; consequently, there was poor attendance of caregivers and CNPs at the trainings.

CNPs covering more than one village: In a few cases, CNPs were asked to cover IYCF nutrition education sessions in their own village as well as a nearby village.

“What we did in my section is that when a dropped out CNP was from health, then we [used] another one from a close by

³⁹ Lead Farmers exist for many different agricultural topics: crops, irrigation, livestock and nutrition. Nutrition Lead Farmers are usually fewer in number than for the other topics.

⁴⁰ Sixty percent of CNPs left the position because of life changes (27 percent of trained CNPs moved away from their village, 15 percent found work, 15 percent had family issues that interfered with the position, 3 percent died), 20 percent did not meet the job description requirements and 20 percent were not recorded.

village, and we changed the work plan. That means a CNP that is already working in another village on Mondays, visits a second village on another day to provide the sessions.”
(AEDOs, FGD)

Selection of caregivers

Following the mobilization of the community, IYCF care group⁴¹ participants were selected according to the following criteria: caregivers of young children aged 6–18 months; spouses of the caregivers (usually a husband); grandmothers (i.e. the mothers of either the mother or father, and in some cases other unrelated grandmothers); Village Heads; and other community members in order to encourage diversity.⁴² In Round one, the IYCF care group selection criteria was communicated top-down by IFSN project staff to government staff at district level, discussed together in preparatory meetings and reviews, then further disseminated to EPA/health centre level (i.e. AEDC/ AEHO), to section level (i.e. AEDO/HSA) and then to the CNPs at community level. Front line extension staff undertook the communication and selection within villages, and IFSN and/or government staff from the District Nutrition Coordination Committee (DNCC) followed up directly with front line extension staff or through supervisors in the EPAs/health centres. However, this extended communication chain led to misinterpretation of selection criteria and it was difficult for IFSN project staff to control the final selection of participants due to the large number of IYCF care groups. It was noted that agriculture and health personnel had different perceptions of vulnerability, particularly since agriculture staff often did not consider pregnant women or parents with young children to be vulnerable within their communities.

From the project reviews undertaken during and after each Round, IFSN and government staff jointly decided to try a different selection process if there were less than 15 eligible caregivers in a village. CNPs recruited additional caregivers from nearby villages; however, this led to tensions in some project sites as neighbouring Village Heads discouraged the caregivers from attending.

Including caregivers outside of sensitized villages caused problems: When an IYCF care group had to be formed from several villages, only a few caregivers could be selected from each village and this was not always considered fair. Some Village Heads felt discriminated against due to not having been involved with either the selection of Lead Farmers and CHVs or in the trainings and sensitizations, and some of them refused to collaborate. Hence, in order to decrease the likelihood of such situations happening and ensure participation, it is important to also conduct sensitization activities in neighbouring villages.

“So we took two mothers per village and the last mother was picked from one of these villages. The others were told to wait because this programme is continuous. [The selection of these two mothers then] was according to the CNP and the Village Head ... I think it was not fair how they selected the women.”
(AEDOs, FGD)

Not all CNPs were able to follow the selection criteria: CNPs included caregivers with children aged less than 6 months or above 18 months as well as pregnant women. In many cases, these caregivers were either not registered or were registered, but with a fabricated age of the child. CNPs also experienced difficulties in justifying the exclusion of pregnant and lactating women as they included grandmothers and Village Heads. In addition, CNPs expected to be supervised by front line extension staff during the caregiver

⁴¹ During Round two, different terminology was introduced as the IYCF nutrition education intervention was aligned with the SUN Movement terminology, e.g. Community Nutrition Facilitators (CNFs) became CNPs, and IYCF groups became IYCF care groups according to the care group model.

⁴² Within the IFSN project, some IYCF care group selection criteria were “compulsory”, such as children aged 6–18 months; however, other programmes target parents earlier (during pregnancy) to be ready for preparing nutritious foods at six months. Other community members included: elders, religious leaders, village development committee members or support group members.

selection process, to reinforce the selection criteria, but this often did not happen.

More than 15 caregivers per IYCF care group:

Villages sometimes selected more than 15 caregivers and more than five other community members. CNPs were instructed to propose a second IYCF care group after the first IYCF nutrition education sessions were completed. However, this was very difficult for the CNPs to implement. If caregivers were interested then the CNPs did not want to leave anyone out; particularly, as they may not be eligible in five months' time. Hence, the reality was that these caregivers often attended, but were not registered and were told that they could only receive the highly regarded IYCF certificate after a second IYCF care group was trained. This in turn, led to attendance rates being recorded that did not reflect reality at the community level and to erroneous monitoring data being collected, which was entered into the IFSN database. Furthermore, the inclusion of more than 15 primary caregivers in the IYCF care groups increased the CNP workload and need for IEC materials.

Inclusion of Key Community Members

To increase the reach of the IYCF nutrition education sessions, either the mother or husband⁴³ were encouraged to attend as well as other key community members, such as village leaders.

Grandmothers were an important target group:

Traditionally, grandmothers have a strong influence on feeding their grandchildren. Hence, by including them in the IYCF nutrition education intervention, they would be able to influence the complementary foods given to their grandchild. When they saw changes in their grandchild's nutritional status, grandmothers would be more likely to communicate the benefits of enriched porridges to other grandmothers, caregivers, friends and neighbours.

"It was also a good idea to include the grandmothers. If the grandmothers know how to prepare the phala⁴⁴ they can take care for the children even like primary caregivers."

(AEDOs, FGD)

Communication of selection criteria: CNPs often did not clearly communicate the selection criteria to the community, and a high number of grandmothers were included with grandchildren older than 18 months and those not having a daughter/daughter-in-law in the IYCF care group. Hence, their capacity was reduced to influence the provision of improved complementary food for an appropriately aged grandchild. Nevertheless, they could still advise caregivers who were not related to them.

Husbands attendance: Husbands attendance was low, although they were highly encouraged to participate in either all or certain IYCF nutrition education sessions. An FGD of husbands found that they purportedly appreciated their wives' participation in the IYCF nutrition education sessions, because childcare practices had improved. However, they did not actively participate because childcare and complementary feeding were considered to be women's affairs and the IYCF nutrition education sessions too time-consuming to forego their farming activities. Even so, they expressed an interest in knowing what their wives were learning, but in a condensed way in order to save time for their farming activities. Hence, the importance of husbands' participation should be stressed during community sensitizations and to develop sessions suited to their ability to attend, to ensure participation.

Village heads' wives participate: A FGD of Group Village Heads found that they had all sent their wives to participate instead of themselves. There were HSA accusations of Village Heads taking advantage of the benefits of IYCF nutrition education session participation for their own gains, and this perceived privileging of relatives

⁴³ The IFSN project included some matriarchal villages where grandmothers looked after their daughter's children. However, many were patriarchal villages where grandmothers looked after their sons' children.

⁴⁴ *Phala* is a generic term for any porridge. Porridge can be made from any type of grain, most often refined maize flour, but sometimes rice, millet or sorghum and, in a few places, a tuber flour. Sometimes with a legume or nut added, but usually with some salt and plenty of sugar.

or other acquaintances of Village Heads caused community tension. However, the Group Village Heads denied these claims and stressed that instead they wanted to underline the importance of the IYCF nutrition education sessions to caregivers and encourage their participation.

“My wife attended, too. For all of us it was the same way, in a village setting when you are the head, it’s your responsibility to be at every meeting that takes place and it’s also the responsibility of the wife to the Village Head to be present at every women gathering. Therefore when this programme was introduced, every Village Head had to go to witness for themselves what was taking place. And it wasn’t on the basis that you have been selected, but to encourage the participants because our presence is a motivation.”

(Group Village Heads, FGD)

4.1.4 Nutrition education

This section looks at the IYCF nutrition education sessions, graduation ceremonies and establishing new IYCF care groups.

IYCF nutrition education sessions

In total, at the time of the process review,⁴⁵ for the two Districts in Round one and two IYCF villages, 30 ToTs sensitized over 175 supervisors and front line extension staff and trained 768 volunteer CNPs. Round one covered 200 villages in 2012–2013, which were studied by the IMCF research team. Round two covered 175 new villages in additional sections of the EPAs during 2013–2014. Volunteer CNPs supported 12 000 caregivers and community members affecting 9 700 children aged 6–18 months on enrolment.

CNPs conducted IYCF nutrition education sessions in rural villages to teach caregivers improved IYCF practices and promotion of recipes for complementary food using locally available foods. The ten IYCF nutrition education

sessions were usually conducted every fortnight over a period of approximately five months; however, some communities decided to meet weekly and finished sooner. Community members decided when (i.e. morning or afternoon) and where (i.e. under a central tree, Village Head’s house, etc.) the IYCF care group would meet for the IYCF nutrition education sessions. This process was coordinated by the CNPs, who were responsible for notifying the caregivers and other community members about the time and location of the next IYCF nutrition education session. Each session lasted approximately two hours and consisted of group discussions, participatory exercises, role-plays, songs, four participatory cooking sessions and one final cooking session to prepare a display for the community of what was learned (Annex 6).

Seasonal workload: To ensure high caregiver participation, it is necessary to take into account the seasonal agricultural calendar to avoid periods when farmers have heavy workloads.

“Sometimes the trainings take place when there is a lot of farm work to do. Also, often the training takes place when farmers have nothing in their homes. They need food to prepare phala for their child but they don’t have anything in their house.”

(AEDOs, FGD)

Participants in a FGD of AEDOs concurred that the best time for implementation of the IYCF nutrition education sessions was July, August up to September, and for CNP and AEDO training was in May and June, which inferred that it was only possible to implement one IYCF care group per year, if held fortnightly. At the outset of the project, optimal times to implement IYCF nutrition education sessions were given as December, February, May and August to best fit with agricultural activities, but this had over-estimated the potential number of IYCF care groups per year.

⁴⁵ Statistics include Round one Group one (R1G1), Round one Group two (R1G2) and Round two Group one (R2G1), but not Round two Group two (R2G2).

The IEC materials

CNP pairs were provided with IEC materials adapted from the *UNICEF IYCF key messages for counselling cards for Africa*⁴⁶ to improve depiction and messaging of local foods for improving diets, along with other newly developed food teaching tools. Each Round ended and commenced with reviews, and the materials and processes were adapted each time. At the end of Round two, plans were underway nationally to merge the resources into one standard set of materials.

The final package planned for Round three includes 11 items:

1. SUN community training manual
2. IYCF care group guide in local language
 - These first two items were previously one project document entitled: “IYCF Facilitation guide for Nutrition ToTs”
3. One set of four nationally harmonised counselling cards⁴⁷
 - This was previously one set of caregiver IYCF key message cards and one set of CNP IYCF facilitation cards, both bound sets of A3 laminated cards
4. One set of local food photographs (65 small A6 cards)
5. One set of photographs (15 A4 cards) of watery porridge, enriched porridges, and balanced meals and snacks
6. One food group poster flip chart (seven A2 posters: one food group circle and one for each of the six food groups)
7. IYCF recipe book in local language
8. Seasonal food availability calendar (blank on one side and completed example on the other)
9. Nutrition-messaged cloth carrier bag for the IEC materials

10. Nutrition-messaged cloth for use as a wrap, decoration or for tailored clothing
11. Hard cover record book, ruler and pen for keeping track of IYCF care group participants and session participations, and for notetaking.

IEC materials described below were used in Round one and two.

ToT and CNP guides were created during TIPs and refined with ToTs, entitled: *IYCF Facilitation guide for Nutrition ToTs* and included guidance on community sensitization and mobilization, IYCF nutrition education session outlines and facilitation, and terms of reference for ToTs and CNPs. These were later integrated into the nationally harmonized IEC materials for Round three: SUN Community Training manual and IYCF care group guide in local language.

Caregiver IYCF key messages counselling cards⁴⁸ were 18 illustrations of optimal childcare and feeding practices, which 34 IYCF care group participants shared⁴⁹ during the IYCF nutrition education session and returned to the CNP pair at the end of the session. The facilitation counselling cards had technical and counselling guidance on the back for each of the key messages.⁵⁰ For Round one, the IYCF key message counselling cards were A2 size to facilitate easy visual presentation to the session participants. However, CNPs criticized the large size booklets as being heavy and difficult to transport, and they were also expensive. To address these issues, the cards were reduced to A3 and a lighter matte laminate was used.

Two sets of food cards with colour photographs of different individual foods were provided for practicing food groups and creating balanced meals. In Round two, the colour photographs of foods were expanded to include indigenous species and some food cards were also produced

⁴⁶UNICEF IYCF key messages for counselling cards for Africa (available at www.unicef.org/nutrition/files/Key_Messages_Booklet_for_counselling_cards.pdf).

⁴⁷ The four modules are: hygiene and sanitation; pregnancy; breastfeeding; and complementary feeding.

⁴⁸ Parts of the project’s IYCF counselling book and processes were used for the national standardized counselling card collection.

⁴⁹ Key Message Books (counselling cards) in *Chichewa* and *Chitumbuka* provided a large visual image of the desired practice accompanied by a simple key message.

⁵⁰ Key messages included: breastfeeding; water, sanitation and hygiene (emphasising food safety and hand washing); age-appropriate feeding and frequency; porridge consistency; locally available seasonal food; six food groups; diversification of family and children’s diet; nutritious snacks; and feeding and caring for a sick child.

as black line drawings, as a pilot, so that more food options could be included and additional sets produced to reach a higher number of people. The drawings could be photocopied or drawn locally.⁵¹ Nevertheless, colour photographs were found to be more attractive and planned for Round three. Colour A4 photographs of three different porridges (i.e. a thin white porridge, a thick green porridge and a thick orange porridge) were also used and found to be effective in all Rounds.

Food guide posters were assumed to be locally available during Round one and two, but were not consistently available. It was decided to reprint them for Round three as they were no longer in stock at MoAIWD headquarters. A seven-poster flip chart was planned for Round three with the first poster of the food guide circle and cups of water along with the key dietary diversity message and six posters, one for each food group, showing some of the variety of foods available in Malawi.

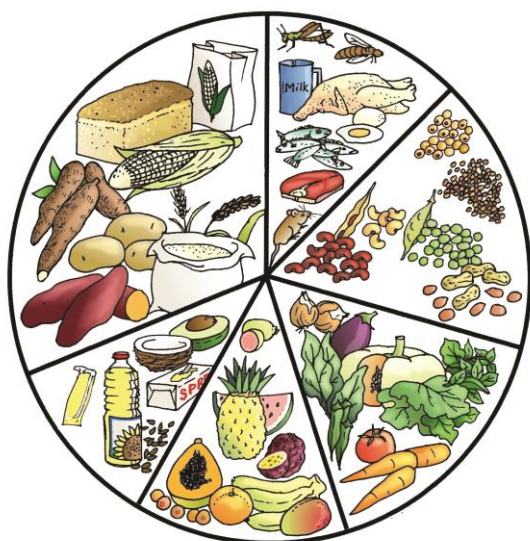


Figure 3: Food guide circle of the Malawi six food groups

Recipe books were criticized for not being context-specific in their frequent reference to cooking oil in recipes and illustrations. Most rural community members do not have access to cooking oil and it is, therefore, important to integrate foods from the fats and oils food group

into recipes and illustrations. Also, an FGD of AEDOs suggested a more logical order of sessions, so that caregivers would “learn at first about seasonal foods and then to start cooking.” Currently, session three covers seasonal food availability after session two on porridge preparation from local foods in a participatory cooking session.

Seasonal food availability calendars were compiled by the IYCF care groups, which were useful in identifying gaps of specific food groups and how to overcome this. Every village was supposed to develop its own calendar specific for the local context, but the review revealed that not all villages did so. Seasonal food availability calendars were particularly useful in teaching about food budgeting as IYCF care group participants developed a better understanding of planning.

The **cloth carrier bag** assisted CNPs to safely store the IEC materials and bring them to each session. After the completion of all IYCF nutrition education sessions, the villages retained the set of IEC materials and were encouraged to initiate new IYCF care groups.

The **cloth wrap**, designed with the food group circle and key dietary diversity message, was provided to individual CNPs to keep, but became an issue of contention when a replacement CNP was needed as there were insufficient supplies available. Round one areas received nutrition t-shirts instead of cloth wraps and replacement t-shirts were also an issue. However, Round three planned to order as many cloth wraps as financially possible to ensure that all CNPs and key community leaders received one.

Delays and inadequate quantities: Delayed distribution and inadequate quantities of IEC materials were reported by all levels. To address this lack of resources, IEC materials had to be shared among several CNPs in some areas. IFSN staff also arranged for photocopies of manuals, guides and counselling cards until the procurement processes were completed.

⁵¹ This approach is called *TALULAR*: Teaching and Learning Using Locally Available Resources and is widely used in Malawian schools, which can empower people to make their own teaching and learning material. *TALULAR* is likely to be used when there are resource constraints.

Participatory Cooking Sessions

Participatory cooking sessions were an integral part of four IYCF nutrition education sessions. The CNPs informed all participants in advance about the complementary foods to be prepared and asked them to bring the required ingredients from home. In some communities, CNPs also requested participants to bring cooking equipment.

A participatory cooking session lasted 23 hours with participants learning about the recipes and acquiring practical skills on the preparation of porridges enriched with locally available and seasonal foods, e.g. with legumes, small fish, potatoes or green leafy vegetables. CNPs and caregivers prepared recipes that had been developed and tested for their nutritional quality, acceptability and palatability during TIPs in the initial formative research phase. Caregivers were encouraged to bring their children aged 6–23 months to the sessions to feed them with the freshly prepared enriched porridges. Afterwards, the CNPs led discussions about the appearance, palatability, consistency and feasibility of the porridge recipes.

Throughout the cooking session, food hygiene principles were reinforced with the participants and practically applied, e.g. washing hands thoroughly. Active involvement of caregivers was ensured through culturally-appropriate songs, role-plays and dancing.

Lack of ingredients: Many participants at a number of sites faced major challenges in sourcing the ingredients. As a consequence, some CNPs purchased the food items from their own pocket; others had to occasionally miss out the cooking sessions. However, for some of the IYCF care groups, Village Heads provided cooking equipment and a roofed venue during the rainy season. The IYCF care groups usually used traditional three-stone stoves as improved stoves were not available.

“What was being done was a person who has soya, should bring it and those who have eggs, vegetables should bring. Onion, tomatoes ... We saw that this was good lessons because it will help us, so we should also take part by

carrying these things and they are teaching us how to look after our children.”

(IYCF Grandmothers, FGD)

Practical sessions were effective: CNPs reported that caregivers more easily applied the new knowledge in these practical sessions. Grandmothers also stated that through practical learning it was easier for them to disseminate the new knowledge and skills.

“During the cooking session ... I really wanted to cook something because the things that I have cooked I cannot forget. Even my child from her marriage [daughter-in-law] - when she comes I would teach her and demonstrate to her.”

(IYCF Grandmothers, FGD)

Age-appropriate serving sizes CNPs observed that it was difficult for caregivers to understand age-appropriate portion serving sizes; particularly, as the recipes the CNPs used in cooking sessions did not include a demonstration of how they could be adapted for different age groups. The recipe books listed individual recipes for three different age groups (6–8 months, 9–11 months and 12–23 months, but practically, it was difficult to follow. The recipes called for very small quantities of each ingredient, cooked separately for children in different age groups. This was a lot of work compared to cooking a balanced family pot and then scooping out the correct amount for different ages.

Substituting ingredients was difficult: Some CNPs and caregivers were not aware of how to substitute ingredients according to seasonality and local availability (e.g. to substitute maize with sorghum). However, several communities became creative and started to integrate mice into the recipes as well as pumpkin seed oil and gourd seed oil. Hence, it was suggested that recipes should provide substitution options, e.g.

if Irish potatoes are not available, then they can be substituted with cassava.⁵²

Porridge acceptance: Caregivers did not have a problem with the different colours of the porridges and they found them appetizing:

“At first it looked new but as the weeks passed [our grandchildren] got used and we started cooking in a bigger pot because [they] were not getting enough porridge.”

(IYCF Grandmothers, FGD)

Training venues: Training venues were not always carefully selected to meet hygienic requirements for the cooking sessions. Although there are residential training centres in each EPA, they were not used at the time as they were not always conveniently located to IYCF care groups and often not well maintained. However, it was suggested to put more emphasis on developing model cooking areas at section level: creating a “greener” site sheltered from the wind and dust, close to a safe source of drinking water, using fuel-efficient stoves and creating a compost to recycle all kitchen resources (water and organic matter).

Graduation ceremonies

Following the successful completion of nine IYCF nutrition education sessions, the communities held a graduation ceremony at section level to which all community members were invited. The graduation ceremonies acknowledged active and regular participation of caregivers and other community participants. Local leaders and other stakeholders attended the graduations in order to motivate the caregivers to follow the new practices and to further disseminate the IYCF messages. During the ceremonies, dramas and songs were presented, and these created the opportunity for discussions among community members on IYCF practices. A final cooking session was conducted, usually during the morning of the event, to display food for discussion (not for eating by the communities) of what they had learned throughout the IYCF

nutrition education sessions. At the end of each ceremony, an IYCF certificate was distributed to each participant of the IYCF care group and each new CNP.

In Round one, the first group (R1G1) of IYCF villages received MWK5 000⁵³ for the graduation ceremony from funds raised outside the project funds. Groups of villages pooled these funds to organize an event at section level, to purchase ingredients for the food displays (porridges, family meals and fresh, nutritious food as examples of food groups) and refreshments for anyone who attended the graduation. The IFSN project and government jointly signed the IYCF certificates. Since it was noted that participants from more remote villages had difficulties in reaching the central ceremonies, it was decided that future graduations (R1G2, R2G1, etc.) should be held closer at Group Village Head level, which improved the attendance of IYCF care group participants. The ceremonies were brief to enable participation of caregivers without them taking too much time out from productive activities.

For graduations after R1G1 there was no extra external funding for supporting the ceremonies as national donor groups changed their policies and no longer allowed any cash to be used for workshops or events. Instead, the policy stated that items had to be purchased from service providers that would directly provide the service/goods and accept payment by cheque (i.e. by limited purchase orders). However, it was difficult to find suppliers in rural areas and to source healthy food and drink choices available in large quantities. This resulted in white refined bread and artificially flavoured sugar drinks being provided for the first round of graduations under the new policy. This was not in-line with the nutrition messages being taught in the project, to select fresh and locally available foods, which is what the first round of graduations was able to emulate. Notwithstanding these issues, the purchases did get better in the next round of graduations with boxes of 100 percent juice and

⁵² The recommendation for alternatives was applied in Round three recipe books using more general terms, such as tuber or grain.

⁵³ Exchange rate on 1 May 2013, MKW5 000 = US\$12.55.

packages of nuts, though the quantities were not enough and unhealthy options continued.

Graduation food: Caregivers and CNPs felt less valued than R1G1 IYCF graduates with the snacks that were served. Some caregivers perceived short graduations to indicate that IFSN project staff were less engaged in the event.

“For Round two we could only bring sobo⁵⁴ and [white] bread. In Round one we could use that money to buy wood, chicken, flour for the ceremony to meet with the village CNPs and community. That demotivates.”
(AEDOs, FGD)

Graduation delays: Delayed arrivals of funds for the refreshments and IYCF certificates in Round two led to graduation ceremonies being conducted approximately six months after the ninth IYCF nutrition education session.

“The trainings ended in March [2014] but the graduations took place just now [in September/October 2014]. When the sessions are completed we inform FAO office and they will assist us in the graduations. They attend the graduations and bring snacks and gifts. It is also the FAO office who prints the certificates for the mothers so we have to wait for them. There is no way we can celebrate without them.”
(AEDOs, FGD)

4.1.5 New IYCF care groups

Round two project reviews identified the need to increase community and government ownership of the project at all levels. Communities were encouraged to continue forming IYCF care groups using their IEC materials and replacing CNPs when the need arises.

Caregivers wanted the IYCF nutrition education sessions to continue: R1G2 caregivers, who had graduated from the IYCF nutrition education sessions acknowledged the importance of what

they had learned, wanted to continue learning new knowledge and skills, and to have refreshers. They also remarked that “others who have young children but did not attend any education on child feeding need to attend.”

Caregivers continued to prepare enriched porridges after graduation, but others stopped:

Round two CNPs reported that, since graduation, some caregivers were feeding their children *nsima*,⁵⁵ because they considered them “too old” for enriched porridge. “But some do still cook, in the morning they cook maybe they add oil or vegetables, one an egg ...” In one village, it was estimated that out of the 15 caregivers who graduated, eight to ten were still cooking enriched porridge. However, for “up to three quarters of those who don’t cook it’s because they lack ingredients.” Nevertheless, the CNPs were confident that caregivers were actually preparing enriched porridge in their homes.

“We chat with them, when we meet we greet each other and we talk to each other ... so we ask each other if they have continued feeding porridge to the children ... so some answer yes and some no ... why not ... some say they have no chickens that are laying eggs.”
(CNPs Round two, FGD)

Caregiver graduates required gifts to motivate them: Round two caregivers had expected to receive gifts at their graduation (i.e. an IYCF certificate and *zitenje* cloth wrap) to recognize their achievements and keep them motivated about the IYCF nutrition education intervention. Group Village Heads explained that whereas CNPs received t-shirts at their graduation, the caregivers “did not receive anything, not even uniforms for easy identification. After the entire great job they did [of preparing the different types of porridge], implying that the CNPs were the champions and not the women.” Hence, these caregivers were not happy with just receiving an IYCF certificate, which they did not know what to do with.

⁵⁴ *Sobo* is flavoured concentrated syrup for making drinks.

⁵⁵ *Nsima* is made from maize flour, boiled in water until it forms a very stiff porridge that is formed into patties (small, flat cakes) and served as a meal with vegetables, legumes or animal-source foods.

“[There] will be some who will join in the future, and these will tell the others that it’s just a useless organization ... But if these who have finished are given a gift, they will say, this is nice, you are lagging behind ...”

(CNPs, Round two, FGD)

Group village heads doubt continuance of IYCF care groups without NGO support: Group Village Heads acknowledged their reliance on CNPs to teach the caregivers and ensure that the IYCF nutrition education sessions took place. There was also a need for CNPs to hold refresher trainings for caregivers “because they add weight to the programme but without them, people would slowly start to forget.” However, the Group Village Heads were uncertain as to whether CNPs would continue to work without NGO support.

CNPs doubt continuance of IYCF care groups without NGO support: Despite commenting that they loved their job even without being paid, Round two CNPs felt that if the government left the IYCF nutrition education sessions in the hands of the HSA or AEDO or AEDC, it would not work.

“For them to have strength, it’s because there are visitors coming in ... their friends ...”

(CNPs, Round two, FGD)

4.2 Family environment

This section summarizes the process review findings on the experiences of different family members participating in the IYCF nutrition education intervention that relate to caregivers’ knowledge of IYCF practices; importance of grandmothers in childcare and feeding; role of fathers in childcare and feeding; role of older siblings in childcare and feeding; sharing of information and knowledge; acceptance of enriched porridges; feeding snacks; and hygiene practices at home.

4.2.1 Caregivers’ knowledge of IYCF practices

Initial lack of knowledge of child feeding: Prior to the IYCF nutrition education sessions, caregivers reported that they grew a variety of foods (and were not necessarily food insecure), but they did not know how to use the foods to provide nutritious and diverse diets for their young children and families, and food secure households sold produce, which they should have retained to ensure a diversified diet. Caregivers stated that previously they were not taught anything about adequate child feeding and were reliant on traditional knowledge (from their mothers/mothers-in-law). Hence, they thought that children could not eat food products from all the food groups.

“We never knew things; we were cooking the porridge from skinned⁵⁶ maize flour which was not [healthy] for our children. But from the school we have learnt different porridges.”
(Mothers, Round two Group one, FGD)

“[In the past], we had plenty food, but to categorize them, to say sweet potatoes, beans, cassava, groundnuts ... bananas ... How to eat them ... we did not know it. But now we know that if in the morning you have eaten cassava, at 10 a.m. you will eat a fruit, and at 12 noon you will eat nsima ... at 4 p.m. another fruit and then sweet potato porridge ... may be you have sweet beer. [We did not grow more food than in the past], no. It is the same, but using it, in the past we did not know that well. You could find one grow many beans, and they could take all of it to the market ... whilst the family needs that, too.”

(CNPs, Round two, FGD)

Learned new knowledge about food groups: The IYCF nutrition education sessions were a highly valued platform of modern knowledge. When asked what they had learned in the IYCF care

⁵⁶ “Skinned” maize flour is refined to remove the bran and germ to remain with “white” maize flour.

groups, caregivers recounted being taught about improving porridge with wild fruits, cassava, potatoes, cooking oil, beans, groundnut flour, mice, grasshoppers, fish, different varieties of cucumbers, bean leaves, mustard leaves, pumpkin leaves, pumpkins and other vegetables. They also knew about the six food groups and considered grasshoppers and *vilungulungu* (edible caterpillar), *wachenje* (edible locust) and *nkhululu* (edible cricket) as locally found sources of protein. However, caregivers had difficulty understanding why certain foods were unhealthy. They knew some food items contained high amounts of sugar, which would reduce their child's immunity and blood levels, and not give anything useful to the child's body. An assessment of caregivers' knowledge before and after the IYCF nutrition education sessions was carried out in the context of the IMCF research project. It was shown that for caregivers, who had had two post-training knowledge tests, their knowledge decreased over time, which indicated the need for ongoing support from CNPs and front line extension staff.

Learning by doing was helpful: Learning new knowledge was not straightforward, but caregivers found the participatory cooking sessions particularly helpful. CNPs corroborated that caregivers more easily memorized the recipes when they practiced preparing enriched porridges.

"There were problems, understanding each other with the women is at times difficult. When a woman is [asked] to explain what they have learned, most of them failed. But when they learned to cook, that is when they did better, but to just learn and keep it in their head ... it's not easy. [In the cooking sessions], that is when they remembered easily, that here you said this and did this ..."

(CNPs, Round two, FGD)

Knowledge on hygiene: Caregivers in FGDs were often found to be knowledgeable on good hygiene practices and how to treat children's diarrhoea. This knowledge was also provided by hospitals and health centres and reinforced

during IYCF nutrition education sessions. In addition, caregivers often reported that they liked the session on hygiene, because they practiced washing their hands correctly with soap and clean water.

Knowledge on home gardens: Some caregivers in FGDs reported that they also learned about planting vegetables in their home-gardens, so that they could use the produce for enriching the porridge and they appreciated this holistic approach of learning about children's diets.

4.2.2 Importance of grandmothers in childcare and feeding

Grandmothers play an influential role on childcare and feeding, and reproductive work within the rural communities, they are well respected and caregivers follow their advice. Hence, it is important to include grandmothers in the IYCF nutrition education sessions, so that they stop promoting any harmful childcare and feeding practices.

"They are well respected, whatever they say, mothers listen to. Now, because them, they have been promoting the old practices. Poor infant feeding practices in the communities. Their involvement influences behaviour changes for the mothers. If they are not involved, they are able to say 'this does not work in this way.' If they understand and they are able to, even explain further to the young mother, this is basically their role."

(IFSN District Nutritionist, Interview)

In a patrilineal society, mothers-in-law (grandmothers) have more power over their daughters-in-law than their own daughters who have married into their husband's family. Hence, the mother-in-law is involved with caring for her sons' children and wants to ensure that the daughter-in-law looks after and feeds them correctly.

Grandmothers spend a lot of time caring for their grandchild. Because of their age they no longer farm or collect water, and they are involved with

childcare, particularly when the caregiver is absent or if she is busy with other tasks.

“If their mother is busy you just carry the child until she finishes, if the child cries you give it back to the mother. Even if they are not busy you still gather them around and you chat. You talk to [the child], that means their mother is working on some other things freely. The child doesn’t trouble them. In the evening you get the child, after you bathe them, clothe them and the child has eaten ... you get it and put it to bed. I sleep together with the child till morning.”

(Related Grandmothers, FGD)

4.2.3 The role of fathers in childcare and feeding

Men do not generally participate in childcare activities; however, some caregivers reported that, if necessary, their husbands cooked for their child.

“When you are out, they cannot allow the child to stay all day long without food. They cook and feed them.”

(Mothers, Round two Group one, FGD)

For caregivers participating in the IYCF nutrition education sessions, they had to obtain the consent of their husbands. Hence, it was important that husbands had a positive attitude towards the IYCF nutrition education sessions; particularly as the husbands had to accept the new knowledge and facilitate adoption of new practices at home. In this regard, the Government of Malawi was promoting male championship whereby men are strongly encouraged to participate in childcare and other household activities to support their wives. Since husbands are responsible for income-generation and are decision-makers on what to buy, what crops to grow and livestock to keep as well as what food products to purchase and the use of animal products in the household’s diet, the IYCF nutrition education intervention reinforced the importance of men participating in the sessions.

“We encourage them to attend the sessions and participate because they are influential at the household. Being the head of the house, whatever he says, even though the mother has learned something, he can say “no, don’t do this.” So, their involvement in the programme has not been very much, but we encourage the husbands to be involved.”

(IFSN District Nutritionist, Interview)

Appropriate sensitization of Group Village Heads improved men’s engagement by encouraging them to participate in the IYCF nutrition education sessions and acknowledging the value of the new practices for the community. However, husbands’ attendance was low, they were generally unwilling to participate and not interested in discussing the IYCF nutrition education sessions with their wives. Husbands gave a number of reasons for not attending the sessions: they claimed to be busy with other activities; doing farm work on fields that were distant to the village; having to work during the hungry season to buy maize for their families to eat; not realizing the importance of the IYCF nutrition education sessions; and feeling uncomfortable with facilitators who were subordinates in the social hierarchy. AEDOs encouraged the caregivers to bring their husbands to the IYCF nutrition education sessions, but the next time they met, the women just passed on their husbands’ excuses and were disappointed as they wanted their husbands to help with the cooking and also to attend the sessions.

All the husbands in the FGD had tasted the porridge during the graduation ceremonies and all learned about IYCF messages when their wives presented what they had learned during the IYCF nutrition education sessions. The husbands were also very knowledgeable about the diversity of porridges, liked their taste and knew that porridge can be enriched with sweet potatoes, small fish, vegetables and eggs.

4.2.4 The role of older siblings in childcare and feeding

In Malawi, older siblings (mainly girl children) play a role in childcare, cooking and feeding, particularly when the mother is busy with other activities. Although siblings were not considered in the IYCF nutrition education sessions, by the age of ten years, girls are capable of preparing porridge/*nsima*, hence it is important that they know how to prepare enriched porridge. Primary school children, who participated in a FGD of JFFLS learners, reported that they undertook the following childcare activities: washed and bathed a younger brother/sister; carried the child on their back; prepared meals; took them to growth monitoring clinics;⁵⁷ and fed them different foods.

“When the women are working on the fields, sometimes they leave their children with the girls. You call it babysitting in the developed countries, but out here a girl looks after her siblings and feeds them. So if they don't know the type of food to give to the child and [they] give the wrong type of food; that is not nutritionally good for this child. Young girls do a lot of caring for their siblings. [Parents] would leave a child maybe at the age of ten. At that age they can prepare porridge, at that age they can prepare nsima. But some girls, in that area, are clever, can do those things much earlier. So if my mother is busy for example, she's gone to the garden or she is going to fetch firewood, she cannot take the baby on her back, it will be too heavy for her, then she would leave the baby with an older sibling.”

(Programme Manager Mzuzu ADD, Interview)

4.2.5 Sharing of information and knowledge

Caregivers and their mothers-in-law learn together: Several caregivers reported that their mother-in-law also participated in the IYCF nutrition education sessions, so that they could learn together. Some caregivers shared their knowledge with their mothers-in-law, who were open to learn and if the IYCF caregiver usually cooked with her mother-in-law, it was easier for her to talk about enriched porridge recipes. However, many mothers-in-law were resistant and it was a sign of disrespect for the younger women to argue. If caregivers anticipated resistance from their mother-in-law, they were encouraged to first talk to a receptive grandmother, who would then approach the mother-in-law to support the new knowledge and practices. If this failed, then they were encouraged to ask front line extension staff to talk with her. Nevertheless, some caregivers who reported initial resistance of mothers-in-law, sisters and other friends were often able to convince them of the positive effects of new ICYF practices.

Sharing knowledge by cooking together: When caregivers shared their new knowledge without demonstrating how to cook enriched porridges, they reported that the other caregivers were hesitant and lacked confidence. However, when the IYCF caregivers prepared enriched complementary foods with them, they were reassured and could subsequently watch their children enjoying enriched porridges. When one caregiver returned to her village, she demonstrated how to prepare different porridges and the other caregivers stopped preparing skinned maize flour porridge.

“When I went I found that they are doing the porridge for the children using skinned maize flour. I told them there is nothing children are getting from this. Why don't you cook soya porridge, mgaiwa⁵⁸, Irish and sweet potato porridge? I explained to them

⁵⁷ JFFLS learners stated that the last growth monitoring clinic that they took their younger sibling to was conducted on 28 September 2014, which was a school day.

⁵⁸ Mgaiwa is whole grain maize flour.

how to prepare and they said I am lying to them, so I cooked them and we fed the children's. They acknowledged that the porridge was good and they stop cooking the skinned maize flour porridge."

(Mothers, Round two Group one, FGD)

Sharing with neighbours who care for each other's children: When the husband and grandmother were not at home and the caregiver wanted to go somewhere, she left her young child with a neighbour, who would cook porridge and feed all the children. Hence, it is important that caregivers show their neighbours how to prepare enriched porridge.

Grandmothers sharing with daughters-in-law: Similarly, grandmothers who attended the IYCF nutrition education sessions shared the new knowledge with their daughters-in-law and even demonstrated how to prepare enriched porridge.

"We told them that we are learning the new methods of feeding the children. So the new methods of feeding the children needs that they eat all six groups of food then they grow [healthy]. And they were asking: 'What can we do?' Then we were teaching them how to prepare the porridges pumpkin, bonya,⁵⁹ soya and others. So if the child eats different foods mixed into the porridge, it will help the child not to lack any food. We have been teaching them and now they know. We even tell them about breastfeeding."

(IYCF Grandmothers, FGD)

Grandmothers worried that daughters-in-law would not cook enriched porridge in their absence: Some grandmothers worried that despite telling their daughters-in-law about the benefits of enriched porridge, the child would still be fed *nsima* in their absence.

Good hygiene practices and caring for a sick child: Mothers-in-law also advised their daughters-in-law on good hygiene practices and

told them when to take their sick child to the health centre without delay.

4.2.6 Acceptance of enriched porridges

Sometimes, caregivers and grandmothers did not initially accept the new recipes, as they were non-traditional recipes, but over time their attitudes changed.

"We thought that's awkward ... for vegetables to be added to porridge. For eggs instead of eating with nsima, they added them to porridge ... but upon looking - because eyes can deceive - we said: 'Can one eat this?' [And we] picked up a spoon and ate ... oh how it tasted ... Since then we said people keep on doing this ... this is real cooking ... but at first we ignored it we said it was filthy."

(Related Grandmothers, FGD)

During the FGD with husbands, one husband stated that he liked the porridge with eggs and that it is prepared regularly in his house. Another husband mentioned that he already eats porridge from soy and maize weekly and sometimes daily, and claimed that he only knew about adding vegetables since the IYCF nutrition education sessions.

Motivating factors to cook enriched porridge

Observing visible improvements in the children's health helped assuage caregivers' and grandmothers' doubts, and confirmed that feeding children enriched porridge was beneficial. Once grandmothers were convinced of the new knowledge, they became staunch advocates of enriched porridge, sharing their knowledge with friends and encouraged other caregivers to adopt the new practices. Many caregivers stated that they could see differences in growth between their IYCF child and older children, which motivated them to not only accept the new information on childcare and feeding practices, but to adopt and continue with

⁵⁹ Bonya is small fish.

them. Caregivers also reported seeing faster growth of the children, they started to walk and talk earlier, and were sick less frequently.

“It is feasible [for families to prepare the enriched porridge] because the children who are admitted in the programme and those who are not, you can see the disparities clearly. They’re well marked and then everyone can say this one is better fed than this one. So the mothers who at first had negative attitudes toward the programme, start to go there, to the fellow mothers and start asking how do you prepare the porridge? And then they learn from each other, there’s that mentorship.”
(SHN Coordinator⁶⁰, Interview)

Husbands in the FGD allowed their wives to attend IYCF nutrition education sessions and wanted them to complete the course, so that they could share their knowledge with other women, despite it taking time away from farming activities. Instead of men feeling suspicious about what their wives were doing away from home, they were more willing to give their wives permission to leave the household to attend the trainings because they could see the benefits for their child. Caregivers also explained that they appreciated being able to learn about improved complementary feeding and that having a supportive mother-in-law and husband enabled them to adopt the new practices.

Barriers to improved child feeding

Unsupportive husbands and grandmothers: It is important that men properly understand the purpose of the IYCF nutrition education sessions to avoid them being resistant to their wives attending; particularly as the wives may not be able to clearly explain. On one occasion, CNPs asked for support and an HSA and field-based ToT visited a very resistant husband, explained the IYCF nutrition education intervention and how it could benefit his child, and he was then agreeable to allow his wife to attend. AEDOs reported that at some of the IYCF nutrition education sessions,

only a few caregivers attended. The reason was because their husbands were discouraging them, saying “What are you doing to benefit there?” Clearly, the husbands were either unaware of the benefits or had forgotten that it would benefit the health of their child. Additionally, in households where the grandmother (i.e. mother or mother-in-law) lived with the nuclear family, it was often reported that she would decide on what meals to cook.

A range of barriers: Caregivers faced a range of other barriers to being able to regularly provide enriched porridge for their children, which included: a lack of diverse ingredients; a lack of knowledge on how to substitute missing food items; unfamiliarity with the new appearance of the meals (i.e. the colour); increased time required to cook enriched porridges compared to traditional complementary foods; they were afraid of being different (i.e. switching to non-traditional recipes) and being mocked by community members for thinking that they were better than others by adopting the new recipes; illiteracy; and not recalling what to cook for the child and how frequently.

“When somebody is illiterate, he or she could not think in how to prepare the desired dish for the child, and in terms of how they can schedule for the child to take up food and you find that a child can be left without any food from morning up to maybe in the afternoon when they are working in their fields. So, that one would [have] a problem in giving the child complementary food, but otherwise if these people are well trained they can know and prepare the schedule to say this time I have to feed my child with maybe porridge or whatsoever.”
(AEHO, Health Centre, Interview)

Age of participation missed six month start of complementary feeding: Caregivers should start IYCF nutrition education sessions before their child is six months of age, so that when the five month training is completed, they have longer to consume the improved complementary food.

⁶⁰ District School Health and Nutrition (SHN) Coordinator.

When older children are enrolled, as was the case in the IFSN project, by the time the IYCF nutrition education sessions finished, they were nearly 2 years of age. It is also important for pregnant and lactating women to be eating a balanced diet, so that the child grows well during pregnancy and whilst breastfeeding.

Learning about complementary feeding and family meals: It would be useful for caregivers to also learn how to integrate enriched porridges into family meal times rather than just preparing separate complementary foods. This is particularly important as caregivers often consider their children “too old” for porridge and start giving them family food instead of an improved complementary meal, even though their child could still benefit from enriched porridges. Hence, caregivers need to be given short cuts to prepare complementary food at the same time as family food, so it does not seem like work. Or, if caregivers only make family foods, it is important to ensure that this food is made more nutritious, so that the young child is still eating healthily.

Animal-source foods saved for special occasions: The Programme Manager Mzuzu ADD explained that despite rural households raising small livestock, they do not consume them unless there is an important visitor or a special occasion, like funerals or weddings, when the husband slaughters. Therefore, in order to diversify their diets with animal-source foods, “people have to raise this livestock, but also to be convinced that once in a while they should slaughter and eat.”

“To be honest, you need three to five goats to obtain adequate milk for consumption. And porridge can be made from it to feed the children.”
(Group Village Heads, FGD)

Several barriers to diversified production: Implementing diversified agriculture has several barriers: access to land; land tenure regulations (i.e. inheritance laws); access to technology; reliance on fertilizer; lack of knowledge on ways to recover soil fertility; and expectations that solutions to the problem will be provided.

Low use of indigenous varieties: In former times, diversity of agricultural production was higher; however, some indigenous varieties are not grown anymore or considered old-fashioned and *nsima* from millet is no longer prepared, though very nutritious. Hence, it is important to grow traditional crops and increase their yield.

Diverse food availability: In many communities, it was not possible to prepare diversified, nutritious dishes because animal-source foods, fats, legumes, nuts, fruits, vegetables and other staples (other grains, Irish or sweet potatoes) were not available. Community members could not access nutritious foods because of poverty and poor input distribution.

Other cultural and behavioural issues of unhealthy eating: In Malawi, all food is cooked, as raw food is not considered part of a meal; there a lack of processing, so fruit is not dried or canned; no understanding of how to put foods together to make a nutritious meal; and lack of forward planning in the agricultural system. Also, culturally, women often think that men will not eat anything different and men think that women will not cook anything different and, therefore, unhealthy eating patterns perpetuate. It is difficult for men to criticize their wife’s cooking; hence, it is important that households discuss cultural expectations of food and family meal composition.

Change of behaviour – cooking and feeding enriched porridge

Reported improvements in child feeding: Despite caregivers facing so many barriers to adopting improved child feeding practices, some behaviour change did occur, although the evidence is based on reported behaviour of caregivers and from what was observed during pre-arranged home visits. The SHN Coordinator stated that feeding habits of caregivers had changed. Before the IYCF nutrition education intervention, caregivers knew how to prepare *therere*,⁶¹ but after their training they knew which foods are required and to add other food groups for the child’s diet.

⁶¹ *Therere* is okra.

Nevertheless, the FNO Mzuzu ADD remarked that it is very unlikely, while conducting an unannounced visit, to randomly find a caregiver preparing enriched porridge in her house. When household visits are announced in advance, the caregivers may prepare special complementary foods just for this occasion, so what is observed does not reflect the real situation at the household level. The DHO Mzimba concurred and called for the development of trustworthy indicators to show evidence of behaviour change. He stated that it is not sufficient to conclude from the number of training sessions, cooking sessions and household visits.

Continued preparation of porridges: The majority of caregivers interviewed reported to having continued preparing enriched porridges for their children after the IYCF nutrition education sessions ended. In a few cases, caregivers stated that their child was already old enough to eat family food and they had stopped preparing enriched porridge. However, in most cases, enriched porridge was prepared in the morning, although the child would eat family food for lunch and dinner, and some caregivers also provided a second porridge meal during the afternoon. The favourite recipe was *mgaiwa* porridge with groundnuts flour and vegetables, and when recipes were disliked by a child the reason was often due to the lack of maize flour.

Husbands supported the change: Respondents inconsistently reported on the active involvement of husbands in the provision of enriched porridges for their children; however, some husbands were purportedly cooking for or feeding their child. Also, the majority of men knew about the preparation of enriched porridges in their households and did not prevent their wives from preparing the porridge.

“That did not happen; if it did, the women would have complained. Because when we cooked the porridge the children loved the porridge, when

feeding the children they finished the porridge, which showed that it was okay ... There wasn't [a case where the man did not agree with the woman].”
(CNP, Round two, FGD)

Food Security support would have helped put knowledge into practice: Nevertheless, caregivers reported that if they were provided with agricultural inputs in addition to the IYCF education sessions, they would have felt better enabled to put their knowledge into practice at home.

4.2.7 Feeding snacks

In the IYCF nutrition education sessions, caregivers learned about healthy snacks (e.g. Mexican apple, banana, guava, *masuku*,⁶² *nkhowe*,⁶³ mango, orange, paw-paw, peaches, avocado pears, pineapple, sugarcane, *thobwa*/*Maheu*⁶⁴ and African bread, and when to provide them to their children. In addition, caregivers also learned about unhealthy snacks (e.g. biscuits, Coca Cola, Fanta, juices, *Kamba*⁶⁵ and sweets).

Snacks purchased by caregivers: During the process review, caregivers reported buying a mix of these healthy and unhealthy snacks and drinks, with banana being the most common snack provided to children.

Difficult to buy healthy snacks following new donor guidelines: As mentioned in the *Nutrition Education* section on page 17, because of changes in national donor groups' policies, no cash allowance was permitted for workshops or events. Previously cash was given to each workshop site to buy and prepare local snacks and meals at the village level. With the change in policy, the FAO Lilongwe office was required to pay directly for all foods and services by cheque following the receipt of an invoice after the services were provided. This type of payment arrangement is not available in villages as there are no banks and people cannot wait a month to be paid for the goods and services they provide.

⁶² *Masuka* is a wild loquat.

⁶³ *Nkhowe* is boiled whole maize.

⁶⁴ *Thobwa*/*Maheu* is a non-alcoholic germinated and fermented grain thin porridge-like drink. *Maheu* is the brand name of a mass-produced variety of *thobwa* that has added sweeteners and artificial flavours.

⁶⁵ *Kamba* is a brand name of salty snacks: artificial cheese flavoured corn puffs are very common and there are also different flavours of crisps.

Hence, the IFSN project team resorted to purchasing large quantities of pre-packaged snacks from one grocery store chain, which was difficult to align with the nutrition messages as it was problematic to secure the quantities of healthy snacks needed.

4.2.8 Hygiene practices at home

The first IYCF nutrition education sessions included topics on hand washing and food safety. Caregivers, mothers-in-law and husbands described the hygiene-related changes that had occurred at home since the IYCF nutrition education sessions.

Hand washing for food preparation and eating:

Round two caregivers explained that before preparing porridge, they first washed their hands with soap and IYCF grandmothers also washed the young children's hands before giving them porridge. Husbands concurred that since attending the IYCF nutrition education sessions, the women "started washing their hands before cooking and the husbands were happy ... but when they don't have [soap], they just wash with water. But still they wash hands ..."

Hand washing for hygiene and sanitation:

Round two caregivers stated that they washed their hands after touching "dirty things," such as the toilet and when changing their child's nappies. Round two CNPs admitted to previously being "backward on how to take care of the home" and would just dip their hands in water without using soap or ash.

Pouring hand washing water from a jug:

Husbands explained that previously one bowl of water would be used for hand washing, with the elders being first and finishing up with the young children.

"[I]n the past we used to wash hands from the same basin, washing hands one after the other, but because of the training, everyone washed hands separately using water that is poured, this is one of the practices that have changed because of school."

(Related Husbands, FGD)

In this way, if someone with a disease started the hand washing, it meant that it would be spread to everyone using the same dirty water, "but now the spread cannot be that fast because [we] wash hands separately." The husbands considered this change in practice important for food hygiene.

Treating river water with chlorine: One of the caregivers interviewed at her home (household visit) collected water from the river and used it for drinking, bathing and washing. Before using the water, chlorine was added, which she obtained "from doctors at the hospital."

CNP household visits: IYCF grandmothers mentioned that CNPs made household visits to check on how caregivers were preparing porridges, feeding the children and maintaining a hygienic home environment.

"They were also checking [the] rubbish pit and where to keep kitchen utensils when they have been washed and the well ... [and] general hygiene to ensure that we are practicing what we learned."

(IYCF Grandmothers, FGD)

Improvements in food safety: One IYCF grandmother reflected on how little they previously knew about what caused their young children to become sick.

"[We would] just leave the pot of the food of the child uncovered, flies and other insects eating from the same and leaving some germs. The same thing we were taking to feed our children. When FAO came we have realized that we fed our children bad things and this is good porridge for our children. Trying the porridge, we have seen our children in the village growing [healthy], strong and fast."

(IYCF Grandmothers, FGD)

4.3 Nutrition and food security linkages

This section focuses on the linkages between the nutrition education and food security components, such as the agricultural inputs

distributed by the IFSN project, FFS and JFFLS. In both Phase one and two of the IFSN project, the emphasis was on improving food security and nutrition of vulnerable households through primarily providing inputs supply. However, in Phase two, the project increased the focus on capacity building of government staff, Lead Farmers and FFS within the agriculture sector and JFFLS in the education sector. FFS and JFFLS were specific interventions of the food security component, which provided new knowledge and practices to groups of farmers and youth on diversified production and consumption as well as life and business skills. As a result, the project assisted the target population to make informed decisions on daily life and managing their farming activities.

4.3.1 Agricultural inputs

The IFSN project design called for distribution of inputs to: diversify agricultural production; provide more diverse foods for direct consumption that included the six food groups; generate income; mitigate and prevent climate change; enable production of manure; provide animal feed; and improve water and sanitation. Diversified agriculture was supported through Lead Farmers/facilitators in FFS, JFFLS and specialized farmer groups (e.g. beans, irrigation, etc.) with 10–15 farmers in most groups.

The IFSN project distributed the following percentage of different seeds (compared in kg): maize (51 percent), cassava (24 percent), beans (7 percent), soya beans (6 percent) and sweet potatoes (5 percent). The remaining 6 percent included: vegetables, groundnuts and mushrooms.

The nutrition component secured “One UN” funding to develop an Integrated Homestead Farming (IHF) approach and distributed non-maize inputs⁶⁶ through a pass-on programme to balance what was provided in the IFSN food security component. These inputs were distributed to the same vulnerable households, focusing on those that were underserved in the

food security component: IYCF families and people living with Human Immunodeficiency Virus (HIV). Diverse seeds and stock were shared with 135 households (75 in Kasungu and 60 in Mzimba), with a plan to multiply the inputs as much as possible and share with other households in the communities.

In relation to the environment, soil and water conservation, the project provided inputs and training to enable the planting of trees in village community forests for climate change mitigation. Also, diverse seeds, fertilizer and training were provided on manure making for soil fertility, pit planting and mulching, and irrigation farming was promoted through trainings and the distribution of 476 treadle pumps and 140 chemical sprayers to farmers in irrigation groups. Water and sanitation was improved through the installation of 30 boreholes (20 in Kasungu and 10 in Mzimba), and trainings on the maintenance of 500 water points from a gravity-fed water system were conducted to enable more than 2 500 families to access clean water. In addition, the project provided materials for the construction of improved toilets. An overview of what distributed inputs supported is provided in Table 2.

As mentioned in section 2.3, on page 5 the IFSN project targeted agricultural inputs to vulnerable households that met particular vulnerability selection criteria and the first cycle of inputs (in IFSN Phase two) were distributed from September–October 2011. At that time, vulnerability selection criteria did not include households with a pregnant woman or with a caregiver, who had a child under 2 years of age, as targeting was based on supporting those most in need. IYCF families were rarely supported with food security inputs, even though some of the IYCF homes were vulnerable, because they were not considered as most vulnerable when compared to other households for the limited amounts of input available.

⁶⁶ Non-maize inputs distributed through the pass-on programme included: tree seedlings and tree seeds (a mixture of fruit, fats, legumes and vegetables); packets of seeds (a mixture of local vegetables, flowers and fruit), oilseeds and legumes; sweet potato vines; bundles of cassava stems; and vaccinated chickens.

Table 2: Overview of support from distributed inputs

Category	Inputs
Staples	Maize, cassava, yellow orange-fleshed sweet potatoes
Fruit	Mangoes, papayas, bananas, watermelons, hibiscus (<i>chidede</i>), guavas, oranges, Mexican apples
Vegetables	Leafy greens, onions, tomatoes, mushrooms
Legumes and nuts	Cowpeas, kidney beans, pigeon peas, soy
Animal-source foods	Dairy animals (cows in Phase one, goats in Phase two), sheep, pigs, chicken, guinea fowls, rabbits, fish, beekeeping
Fats	Avocado, sunflower
Water (drinking)	Boreholes, gravity-fed water
Irrigation	Treadle pumps, irrigation schemes
Sanitation	Toilets
Forests	Timber and fuel trees
Pest management	Sprayers, marigolds (IHF)
Fertility	Fertilizers, agroforestry species (IFSN and IHF)

Following the completion of TIPs in 2012, the IYCF nutrition education intervention was integrated into the IFSN project and participants were supposed to be selected from the households that were part of Round one input support. However, there were very few households with caregivers from the households receiving agricultural support, so other households had to be selected. This resulted in a very limited number of households receiving both IYCF nutrition education and agricultural inputs. The IMCF research found a 7 percent overlap between food security and IYCF nutrition education interventions at endline and a 17 percent overlap at mid-term.

Ineffectiveness of agricultural inputs: The effectiveness of agricultural inputs was determined by households having access to land and markets; being capable of keeping livestock which were contextually appropriate; having adequate knowledge of farming practices; and utilizing the agricultural products at home and/or for sale. However, some of the inputs were new to the participants, such as rabbits, pigeon peas, hibiscus and marigolds, and in other cases pigs were not acceptable because of religious beliefs. It is, therefore, important to undertake an initial community assessment to ascertain familiarity

with different types of foods and **highlight food culture**, such as taboos.

Gender and intra-household decisions: There was a need to better understand intra-household gender relations and decision-making in terms of allocation of inputs, and control and access to assets within the household, which would enable optimal context-specific targeting of familiar, culturally-sensitive inputs to families with young children through a household approach.

Heavy focus on maize seeds and fertilizers: The IFSN project heavily focused on maize seeds and fertilizers, which resulted in higher maize yields for the beneficiaries, but this undermined efforts to diversify agricultural production according to the Malawi six food group guide. Hence, it was questionable as to what extent agricultural diversification had led to increased dietary diversity; particularly as few households with children under 2 years of age received any kind of input delivery other than maize and fertilizers from the project, and the majority of IYCF participants received no food security support.

Targeting a package of food security inputs to match the six food groups: Ideally, IYCF families should have been supported with a package of inputs based on the six food groups, which they could choose from, instead of only receiving certain components of that package (primarily maize), with the assumption that the remainder could be acquired from somewhere. By providing caregivers with inputs that matched the food groups, this would have enabled them to grow nutritious foods needed in order to follow the IYCF recommendations.

If distribution of inputs was targeted at caregivers after completion of the IYCF nutrition education sessions, this would have acted as an incentive for attendance, reinforced the nutrition messages about cultivating more diversified crops, and provided the means for caregivers to change their practices. However, careful harmonization of food security and nutrition education activities would be needed, so that they dovetail and effectively fit into the seasonal crop calendar. Even so, other respondents felt that it was more important for agricultural inputs to be distributed before the IYCF nutrition

education sessions commenced, so that caregivers could utilize their crops as ingredients in the enriched porridge recipes, which they learned about during the IYCF course.

4.3.2 Improving agricultural practices through farmer field schools

In Phase two of the IFSN project, a total of 4 600 farmers were trained in FFS,⁶⁷ which are mainly conducted during the rainy season calendar. AEDCs, AEDOs and Lead Farmers were trained as FFS facilitators in two-week trainings on a range of topics, including two days on nutrition.

According to the IFSN mid-term evaluation report, training of front line extension staff, farmers and Lead Farmers resulted in improved knowledge and skills on crop production, irrigation and livestock. Lead Farmers also acquired knowledge of better crop management, especially in the planting of maize and appropriate application of fertilizer, which led to improved yields. Production constraints discussed included: untimely fertilizer application, incorrect plant population and low use of improved crop varieties, organic manure and conservation agriculture technologies.

FFS participants were supposed to learn about nutrition education and the following nutrition-related topics were discussed: (i) What is food?; (ii) Why do we eat?; (iii) We need a variety of foods for good nutrition: Malawi six food groups; (iv) Food needs vary with age groups and special conditions; (v) Sanitation and hygiene; (vi) Seasonal food availability calendar - what it is; how to prepare it; how to use it; and (vii) The need for nutrition and care for both crops and humans at different stages through practicals, role plays, drama and poems.

Little IYCF-FFS overlap: Caregivers with young children and pregnant women were often not identified as vulnerable households to be eligible for participation in FFS, so IYCF caregiver households were not usually also part of FFS. To be eligible for membership, some FFS required participants to have access to land adjacent to the central meeting point of the group to enable weekly rotation of field cultivation and that FFS-promoted crops had to be cultivated on this land. The use of own land was supposed to strengthen the commitment of farmers in FFS participation; however, this conditionality often precluded the participation of female farmers⁶⁸ and other vulnerable households that did not own land. Furthermore, accurate records were not always kept by FFS showing which farmers received particular inputs and this created difficulties when trying to determine the number of households with IYCF nutrition education participants that had been targeted in FFS.

FFS attendance perceived as time consuming: Attending FFS was perceived as time consuming and detracted from household agricultural activities and household tasks. Female farmers attended the FFS and were able to talk during the sessions, and some came with their husbands; however, a grandmother occasionally replaced her daughter-in-law and participated in the FFS to relieve her. In addition, husbands often refused to participate in the FFS and several sent their wives, requesting them to report on what had happened.

Integration of nutrition-related topics into FFS was very weakly implemented: It was difficult to bring up nutrition during the FFS sessions as there was no FFS nutrition handbook. Trainers did not know the topics well and lacked the expertise and confidence when training the farmers in

⁶⁷ A group of 25–30 farmers affected and interested in solving a production constraint forms a FFS. Together with FFS facilitators, farmers design field experiments to compare new or improved technology with their practice. They select a host farmer and a site, and meet at agreed periods determined by need, crop age and growth stages (8–12 meetings per season). By analyzing differences in performance (and reasons for the differences) of a number of treatments throughout the crop's life cycle, farmers can make an informed decision on adaptation/adoption, and the FFS reaches consensus on what management decision to implement. In addition to production constraints, the FFS is supposed to discuss nutrition-related topics. After the completion of a specific FFS, a new production constraint is introduced to the group. The topic is identified by the group in a brainstorming session or the next topic is selected on their priority list (which was developed at the outset of the FFS).

⁶⁸ The opportunity for female farmers to engage in a FFS may have been limited because farm land is usually controlled by the male household head.

nutrition. Nevertheless, there were different opportunities of sharing knowledge on nutrition.

“Some [mothers] were found in IYCF but also at FFS; that meant the knowledge progressed, when you are in a meeting chatting or discussing or at the farm, then they could also add in. If it was at IYCF those not in the programme could also [share]. At the FFS, the same when they joined other organizations, we have other groups like CADECOM,⁶⁹ village savings so in all those they also shared [their knowledge. There is] very much [opportunity to share knowledge.]”
(Field-based ToT, Interview)

Best results with food security plus nutrition:

Preliminary IMCF research findings⁷⁰ showed an increased dietary diversity among the few children whose parents were also part of the food security interventions and there were signs that stunting decreased, showing that the best results were in locations with integrated agriculture-nutrition education interventions.

FFS were not present in every village: Some CNPs were not familiar with the concept of FFS as they were not implemented in all villages of the EPAs.

Farmers needed longer duration of food security support: Farmers were supported for one agricultural rainy season, but needed a longer duration of support with a more systematic step-by-step approach to learning by doing.

Over-emphasis on maize: The FFS content concentrated on maize production with little or no focus on diversified food production for improved food security and nutrition.

Seasonal agricultural calendars: Every village was supposed to develop its own calendar, so that gaps in the six food groups’ availability could

be identified and covered, which would ensure that community members had year-round access to nutritious food.

Agricultural improvements needed for complementary feeding:

In order to improve the quality of complementary foods, it is important to: (1) diversify agricultural production and balance cultivation of cash crops/livestock and crops/livestock for family consumption; and (2) recognize cultivated crops/livestock for their nutritional value following the six food group model, and understand how and when they can be integrated into family diets, such as through knowledge on seasonality, storage requirements, food budgeting and processing/preservation.

“Because sometimes you find that the households [...] is food insecure, but when you try to look around you find that there’s plenty of cassava, but they are not utilizing [it]. When they see cassava, they just think of money.”
(SHN Coordinator, Interview)

4.3.3 Improving agricultural practices through JFFLS

During Phase two of the IFSN project, a total of 3 300 school children were trained in JFFLS.⁷¹ The project targets female and male primary school learners and vulnerable children, including: in and out-of-school children, children affected directly or indirectly by HIV and AIDS aged 12–18 years old. A total of 114 JFFLS were set up during the IFSN project in collaboration with the Government of Malawi. Each JFFLS comprises 30 learners (selected by the community) and one facilitator. The district SHN Coordinator in collaboration with a team of Primary School Education Advisors selected primary schools that would be assisted in integrating nutrition education and a school garden (plus fruit tree cultivation) through the JFFLS approach, based on

⁶⁹Catholic Development Commission in Malawi (CADECOM).

⁷⁰ Preliminary IMCF research findings were presented at the national dissemination meeting in Lilongwe/Malawi on 18 February 2015.

⁷¹ The JFFLS concept is a group extension approach that enables the learners to participate in the study of crops and livestock with the aim of allowing the learners to self-discover the effects of following or not following technical recommendations in crops and livestock production. The JFFLS approach incorporates concepts and methods from agro-ecology, experiential education and community development to promote sustainable agriculture. The approach is participatory and aims at improving the children’s self-esteem, sense of initiative and solidarity as well as enabling learners to problem solve and be better able to understand recommendations after making observations on the demonstrations.

the availability of infrastructure for theoretical classes and agricultural land for practical exercises. One facilitator per school received training from the IFSN project in a two-week training (alongside the FFS facilitators) prior to the initiation of the JFFLS. Twenty-eight teachers from Kasungu District and 34 teachers from Mzimba District were trained in JFFLS, and 62 JFFLS were formed.

During JFFLS sessions, learners were taught different agricultural, post-harvest and social skills, which covered a wide range of topics. Learners are taught about similarities between growing healthy crops, small livestock and healthy children, which enables them to better understand the principles of nutrition and hygiene. Learners also practice processing and utilizing different food types, and develop menus using diverse, nutritious ingredients from the six food groups. In addition, learners carry out experiential learning activities that help them understand the ecology of their crops and livestock. These activities involve simple experiments, regular field observations and group analysis. The knowledge gained from these activities enables the learners to make their own locally specific decisions about crop and livestock practices.

According to IFSN project reports there were many benefits of JFFLS: learners were found to be adopting improved agricultural production practices from the JFFLS, such as planting one-to-one;⁷² manure making; soil and water conservation; correctly applying fertilizer; planting legumes/fruits; and protecting the environment. Learners were also engaged in planting of village forest plantations for climate change mitigation. Income from produce grown assisted in funding various school activities that could not otherwise be funded, e.g. school uniforms for needy learners, school footballs and netballs, and inputs for the 2014–2015 JFFLS season. In addition, schools were more oriented to the concept of farming as a business, teachers acquired extra knowledge in agriculture and

horticulture, and some parents adopted the farming practices through learners.

Selection of schools unclear: Many of the teachers trained as JFFLS facilitators did not know why their school had been selected.

Unclear school level Implementation: The JFFLS curriculum was not finalized and there was consequently no clear concept for implementation. Also, the JFFLS facilitators lacked kitchen facilities at primary schools to conduct practical training with the learners.

“That was a bit of a problem, because there, the teachers who were trained were school teachers. And after the training, these teachers didn’t have the facilities at the schools to demonstrate the things on nutrition ... That was lacking and we should have looked at this earlier but this is a very fertile area where we can extend our programmes. For example, if the learners are taught how to prepare the best porridge and they see it: this is the best porridge, this is the bad, then they will be our best vehicle to extend the knowledge to their parents at home.”

(IFSN Project Coordinator, Interview)

The SHN Coordinator commented that in previous times, cooking lessons were included in Home Economics when it was an examinable subject, but “when it ceased to be an examinable subject, then teachers sat back.”

Low school children coverage: According to the project document, 120 schools were to have benefitted from a vegetable garden plus fruit tree cultivation and 10 000 school children should have received education on vegetable and fruit tree cultivation plus nutrition education. Although the planned number of schools was almost reached (114), far less school children were reached (3 300) and there was no systematic search for children who dropped out of school due to vulnerability.

⁷² One-to-one is a planting technique where one maize seed is planted per hole along with fertilizer (organic and inorganic). Previously, three maize seeds would be added to one hole and often without fertilizer. Yields are greater when using the one-to-one planting technique.

Overly focused on maize: Although FAO guidelines for JFFLS included a range of topics, the variable extent of support⁷³ provided to the primary schools in Kasungu and Mzimba Districts precluded a conclusive JFFLS approach. The main focus was on maize cultivation – like in the case of FFS – but, JFFLS learners reported also growing soya and beans. The maize was used by final year primary school learners when they were sitting exams, and the soya and beans were sold. Additionally, many JFFLS asked for small livestock, but only one or two ran piggeries, and the demand was not fulfilled. Despite having been giving fruit trees, they were not in good condition when delivered and were not subsequently watered properly; consequently, none survived. Hence, the focus on agricultural or dietary diversity was not apparent.

Limited nutrition content in JFFLS curricula: The JFFLS facilitator commented that during her training she only learned about the six food groups and types of diseases caused by malnutrition. However, her JFFLS learners reported only learning about the six food groups, although they were sharing this information with family and friends.

Untimely distribution of inputs: In many JFFLS, crops were planted much later than usual because inputs were distributed when the schools were closed. However, in some communities, JFFLS learners were allowed to come and plant the crops during their school holiday.

“But the facilitators that used their [common sense] they call those communities and ask the parents to release the children to come and work. So in other schools it did well. That is the problem the school calendar and the farming calendar.”
(IFSN District Manager - Mzimba, Interview)

Lack of tools: JFFLS learners reported having a lack of tools to use when undertaking their

activities, e.g. they required watering cans for drawing water as well as hoes and wheel barrows for making manure.

Greater confidence with group work: The JFFLS facilitator reported that the learners are much more knowledgeable on farming matters compared to when the JFFLS started three years earlier, more confident interacting with others in a group and “they have realised that when we talk about fruits, we don’t mean only those planted at home, even wild fruits are also considerable.”

Schedule of JFFLS activities: The JFFLS facilitator explained that JFFLS activities are carried out after regular classes. A topic is chosen, often based on the type of activities undertaken at the plots, with theory first being explained in class with discussions allowed, before learners are able to do practical aspects at the plot on the following Wednesday.

Theft of maize: The JFFLS facilitator was concerned about the sustainability of the JFFLS, following the theft of harvested maize. She commented that the JFFLS learners need to see that they or their friends who are helping them are directly benefitting from the crops grown, in order to take ownership of the intervention. The theft resulted in maize not being available for the learners in grade seven and eight to eat while sitting their exams.

4.4 Supporting existing delivery mechanisms for sustainability and scale up

This section looks at the existing delivery mechanisms, which the IFSN project supported to ensure sustainability and scale up. The project aimed to work in strong partnership with the Government of Malawi and incorporated existing delivery mechanisms at different levels related to coordination, collaboration; capacity building and training; supervision, monitoring and reporting, into all interventions under the

⁷³ JFFLS received varying levels of support in terms of inputs, such as fruit trees, maize seed, fertilizer, guinea fowl and training, and did not systematically include: cultivation of fruit trees, small livestock or vegetable gardens at the selected schools. However, all primary schools received a one-off delivery of notebooks, pencils, flipcharts and rulers to enable the learners to record JFFLS activities in the field.

nutrition component to ensure sustainability and scale up. The IFSN project mainly provided support to the agriculture, health and education sectors under the overall district coordination from MoLGRD through the collaboration of different cadres of government staff at national, ADD, district, EPA, section and community levels (Annex 7).

4.4.1 National level

At the national level, the NPA worked with government nutrition focal persons primarily in MoAIWD, MoH (clinical nutrition unit) and DNHA (multi-sectoral nutrition coordination), with some interaction with Ministry of Education, Science and Technology (MoEST). The NPA participated in several national agriculture and nutrition policy and programme committees.

The National Nutrition Committee is coordinated under MoH (since moving from OPC in 2014). The National Nutrition Committee is supposed to meet twice per year and has generally met at least once every year since 2004. The five Technical Working Groups (TWGs) are supposed to meet at a minimum of quarterly: (i) Nutrition care support and treatment; (ii) Nutrition education and training; (iii) Information systems and research; (iv) Infant and young child nutrition; and (v) Micronutrients.

MoAIWD has nutrition-relevant TWGs under ASWAp and the key ones are: (i) Technology Generation and Dissemination, which focuses on seed diversity, and farming methods and processes; (ii) Food Security and Risk Management, which aims to ensure that all Malawians have the food they need for an active and healthy life; and (iii) Monitoring and Evaluation of all agriculture's activities and outcomes. For nutrition, the issue has been to ensure that food security measurements align with the six food groups, such as food balance sheets and food consumption.

MoEST has a Cross-cutting issues TWG, which includes the topic of SHN under the National

Education Strategic Plan. SHN also falls under the Nutrition Education and Training TWG in MoH; JFFLS is part of this TWG.

4.4.2 Division level

ADDs: The IFSN project management unit was hosted in the Kasungu ADD and worked closely with staff there. Mzimba District falls under the Mzuzu ADD and the Mzimba IFSN project staff maintained a close connection with the staff there. In addition, there are two Subject Matter Specialists for Nutrition at ADD level who support development and implementation of plans at district levels.

Other sectors at division level vary greatly, so cross-collaboration is not in the same way as at national and district level. The IFSN project primarily supported agriculture, which then made linkages to other sectors, as needed.

4.4.3 District level

At the District level, IFSN supported a number of government staff from the agriculture, health and education sectors.⁷⁴ There is one key district nutrition-related committee, which links with other sectoral committees that report to the overall District Executive Committee (DEC):

1. **District Nutrition Coordination Committee (DNCC):** Each district is supposed to have a DNCC, which should meet quarterly, be chaired by the District Commissioner's office, is generally assigned to the District's Director of Planning and Development (DPD),⁷⁵ and includes nutrition focal persons from MoAIWD, MoH, MoEST, NGOs and CBOs to coordinate and review nutrition programme implementation. The DNCC should also mainstream nutrition messages, share best practices, establish how challenges are dealt with, help to harmonize nutrition intervention approaches, find out how activities are being documented, highlight policy requirements, avoid duplication, share what is happening with the SUN Movement and apply lessons learned to nutrition

⁷⁴ Within MoAIWD: DADO, FNO. Within MoEST: SHN Coordinator. Within MoH: DHO, DEHO, AEHO, HSA. Within MoLGRD: DPD. At the community level: the CNPs are comprised of Lead Farmers and CHVs.

⁷⁵ The DPD coordinates the formulation and revision of district development plans and ensures that the government and development partners implement programmes and projects included in the district development plan.

planning and programming. Government nutrition directives are also communicated through the DPD. Below the DNCC are nutrition committees at area and community level established with NECS, which are currently still rolling out throughout the country.

2. **The District Agricultural Extension Coordination Committee (DAECC)** is headed by the District Development Officer (DADO),⁷⁶ and is responsible for coordination of all agricultural extension activities. Its membership includes any sector or partners supporting agriculture, food and nutrition, including MoEST. Below DAECC there are Agriculture Stakeholder Panels at area and community levels.
3. **The DEC:** All district coordination committees fall under the DEC, including the DNCC and DAECC. The DEC is chaired by the District Commissioner and comprises all district leaders from government, civil society, business, religious and traditional leaders.

However, meetings are not regularly conducted, attendance is low when lunch and transport allowances are not provided, participation of organizational representatives frequently changes and there are limited funds available to host the committee meetings, although funding should not be an issue as most people are based near the district offices. Where allowances are provided the meetings are well attended.

Project bypassing district leaders: It was reported that IFSN project support of district agriculture staff was not always effective. Sometimes, the IFSN project bypassed the responsible government staff and instead of them being central to the planning and coordination, support often went straight from the project to the field staff.

High-level positioning of nutrition continues to be a challenge at all levels: At the time of the process review, the DNHA was in transition,

moving from OPC to MoH, which was considered by the nutrition community as a step backward.

Cross-sectoral collaboration is not yet ideal: Nutrition has been better prioritized and is more organized at national level since the introduction of the DNHA in 2004. However, poor cross-sectoral collaboration and limited information sharing is reported at ADD levels as well as at district and community levels. Nevertheless, it was assumed that development projects, which aimed to strengthen multi-sectoral approaches would improve district level coordination through their activities.

“In the context of nutrition, I think [collaboration is] mostly maybe through projects. For example in the FAO project if you look at the component on nutrition it talks about several other things like water and sanitation, hygiene and all that. That’s where our colleagues come in to say from the water sector these are the things that we are promoting in nowadays ... We end there; otherwise apart from having coordination through certain projects, we don’t really ... I would not say we work together.”

(FNO, Interview)

Cross-sectoral work within the project facilitated cross-fertilization of ideas: The Senior AEHO commented that the system of ToTs working across districts, divisions and sectors and within different government levels enabled new relationships to be established, which then facilitated cross-fertilization of ideas and improved cross-sectoral collaboration.

“[As] I said, we have also extended our horizons. Instead of just knowing our [colleagues] from Mzimba only, we are able to interact with communities from Kasungu and other partners during the stakeholders meetings.”

(Senior AEHO, Interview)

⁷⁶ The DADO works under the ADD at district level, oversees the IFSN project and the IFSN Project Coordinator, oversees the Agricultural Extension systems, including the trainings, is head of the DAECC, undertakes quarterly supervision visits to IFSN sites and may participate in review meetings.

Disconnect between DNCC and DEC: It was noted that communication and collaboration between the DNCC and DEC is difficult to establish and maintain because of irregular meetings. The intermittent activity of the DNCC results in a lack of communication about nutrition activities to the DEC and low quality nutrition interventions are neither being identified by DNCC nor scrutinized by the DEC.

Importance of DC leading DNCC to support multi-sectoral approach: The FNO stressed the importance of DNCC leadership by, and communication through, the DPD to ensure that nutrition is seen to be both an agriculture and health issue.

Inconsistent nutrition approaches: The varied attendance of members at DNCC meetings contributes to the continuation of inconsistent nutrition messages being disseminated to communities. Different projects use different terminology, training approaches and IEC materials, which are not always in-line with the national agenda, e.g. terminology of the IFSN project was adapted over time to harmonize with the national SUN Movement as it was being developed through committees, because IFSN staff were an integral part of the system.

Extension staff struggle to implement together: At the field level, during community sensitization, there was a weak partnership between AEDOs and HSAs in Kasungu District, so that it was mainly done by AEDOs, and this was attributed to the late integration of HSAs in the IFSN project.

4.4.4 Capacity building and training

Increased workload of government staff: The IFSN project contributed to an increased workload for government staff and exacerbated the multiple roles, which they had to fulfil. Government staff conducted their general tasks along with managing the support provided by different projects, including the IFSN-related activities. Projects should assist government and systems to do their work better, but often added complications to it, which led to government staff prioritizing the fulfilment of tasks for the NGO that paid the highest Daily Subsistence Allowance (DSA) rates and transportation support, and neglecting NGOs that paid low rates. In addition,

the work focus of government staff switched to non-IFSN areas within their catchment areas due to an assumption that IFSN project staff would be adequately looking after these areas. Consequently, they did not ensure the effective implementation of the IFSN project and the supervision of front line extension staff. Hence, there was a need to harmonize IFSN activities with government staff general tasks and those for other projects, so that front line extension staff can implement them, and this requires good planning.

Government vacancies: High vacancy rates for government staff positions from front line level upwards were found to impede the effective implementation of project activities. This was particularly the case for positions related to nutrition, which included vacancies for the MoAIWD FNO and DHO Nutritionist; especially in Kasungu.

Differing extension areas: The multiple geographical overlaps between health and agriculture duty areas led to a variety of problems related to vacant positions. The sectors have different catchment area boundaries, so that areas served by agricultural extension systems do not correspond with health areas. In the IFSN project, and the overarching SUN Movement, agriculture and health are expected to collaborate, therefore staff from one sector need to coordinate their community work with several people from the other sector. In some IFSN project areas, the resultant difficulties were exacerbated due to a poor coverage of HSAs. Consequently, AEDOs reportedly had to synchronize their activities with three or more HSAs, which impeded the communication and coordination of their duties, impinged on the time they spent in the communities and affected the quality of their work. Possible solutions include: having an FNO sit at AEDC level to ensure the harmonisation of agriculture and health nutrition activities and to track their integration or to redraw catchment areas, so that agriculture, education, gender and health catchment areas fit neatly together.

Nutrition extension existed in the past and should again: The DADO reported that extension messages were more easily delivered in former

times when there was still the front line extension post of the Farm Home Assistant (FHA) that “helped the community to improve their homes in terms of sanitation, backyard gardening, preparation of recipes and small business by women, as income generation activities.” Farmers and Nutritionists have called for this post to be reinstated.

Food and nutrition skills useful to apply in other areas: Government staff involved with the IYCF nutrition education intervention received training in nutrition and acquired a better knowledge of IYCF practices. Hence, the reach of IYCF messages was enhanced by IFSN ToTs applying the new knowledge and skills into their daily work, so that communities not targeted by IFSN could still benefit.

“Ah, it’s an eye opener on how maybe to prepare some food items in the district, because what IFSN is doing is different from what other projects are doing. It can be maybe promoting the six food groups, but then how to prepare them, the multi-mix principle; I think it’s not really done in some of the [villages in my catchment] area. But [IFSN] is a good project that is worth copying ... and pasting into the other areas that are also doing nutrition projects.”

(District-based ToT, Interview)

Improved diets for staff: Government staff also felt that the nutrition training had not only benefited them professionally, but led to improvements in the diets of their own families.

“In my case, not only to community members but also even to us as extension workers as I said we were one-sided trained but now at least we are double-sided. Therefore, we have even improved nutritionally in our households. We were not able to eat mgaiwa but now we prioritize mgaiwa to white maize flour.”

(Senior AEHO, Interview)

It is important, therefore, that capacity building on nutrition topics be delivered by appropriately

trained people. In this regard, the DADO suggested that more officers are employed who would be “strictly there to train the community only in nutrition” including a “training [for] farmers [on] how to prepare good recipes.”

Ongoing trainings and refreshers needed: In terms of capacity building needs for the different cadres of government staff involved with the nutrition education intervention, regular refresher trainings were requested for:

- ToTs as they were from different levels and sectors, so there were differences in knowledge base and a power hierarchy existed when doing trainings. Refreshers would help everyone be on the same page with knowledge and skills.
- HSAs who had limited technical capacity on nutrition topics with only six months on the job training. They particularly had trouble keeping up with new IYCF recommendations.
- CNPs who needed more support on: planning and preparing for sessions, mobilizing the community, facilitation skills and technical topics.
- Additional nutrition trainings were called for Group Village Heads and Village Heads, so that they could backstop implementation of the IYCF nutrition education intervention.

4.4.5 Supervision, monitoring and reporting

CNPs were supported by HSAs from MoH and by AEDOs from MoAIWD, who in turn were supervised and supported by AEHOs and/or AEDCs, who were backstopped by the DNCC. During the ten IYCF nutrition education sessions, CNPs recorded the attendance of caregivers and other community members for monitoring purposes.

Monitoring, support, supervision and reporting was planned to be done by front line extension staff, area supervisors, DNCC and the national nutrition coordinators from each sector and periodically from DHNA, but improvements are

needed for providing better support, data collection and measuring impact.

The CNP visited the household where the child lived to discuss different issues with the caregiver. The CNPs checked how the caregivers were feeding the children and practicing personal and home hygiene (rubbish/compost pits, where kitchen utensils were kept after being washed and the state of the well) to ensure that they were applying what they learned.

Front line extension staff support 10–20 villages (20–40 CNPs) and are supposed to attend a number of the CNP facilitated IYCF nutrition education sessions to provide support, collect information on participation from the CNPs attendance registers, observe for quality impacts and record on a one-page form.⁷⁷

Supervisors at EPA and health centre level supervise approximately 1020 front line extension staff from each sector and are supposed to compile quarterly reports from front line extension staff on participation and monitoring details, which are then sent to their appropriate District Nutritionists from either agriculture or health, who verify that there is no double counting in this joint monitoring. In the IFSN project's case, the agriculture structure was the primary channel for communication.

Districts then compile and submit reports to regional and national levels with copies to the IFSN project support unit in Kasungu.

Because the process was not as smooth or reliable as it should be, IFSN project staff supported collection of attendance registers from the area level and carried them to the district level where data was input, analysed and reported on every quarter and after field visits. Data was consolidated by the government district staff during Round one of IYCF villages, but in subsequent rounds, a temporary data entry clerk was hired for a few weeks to assist. Data was then submitted to the FAO Malawi office and was supposed to be entered into an IFSN project database to capture all components of the project (food security and nutrition education).

Unfortunately, the project database was not completed until the last year of the project, which left many data gaps. Fortunately, however, raw data for the nutrition component exists for determining project scale as well as rigorous IYCF research data for impact collected by the IMCF research team.

During the roll-out of the IYCF nutrition education intervention, the ToTs held “review” and planning meetings at community area and district levels. District level “reviews” were usually attended by national coordinators from agriculture, health, nutrition and FAO, especially in the last year of the project. The review meetings were supposed to take place annually, but in reality took place twice a year. Based on these review meetings, adjustments were made to the IYCF nutrition education intervention, such as an increase and improvement in community sensitizations.

Supporting caregivers with household visits was helpful: Household visits were supposed to be conducted regularly by CNPs and front line extension staff in order to understand what was happening at the household level, identify any barriers that caregivers were facing in adopting new practices, give feedback on porridge preparation, show an interest in the family's situation and to motivate them to continue with enriched porridge.

“If we have forgotten the mixture of the porridges, they were coming home to remind us. The teacher came to almost every home and when he is needed, he went on encouraging us to feed the children. So we were encouraged by the teacher's conduct and we believed him that he will manage.”

(Mothers, Round two Group one, FGD)

Participants of one IYCF care group reported having frequent visits from the CNPs during the IYCF nutrition education sessions. When a caregiver found all the ingredients, she invited the CNP to come to her house to supervise

⁷⁷ Outreach capacity was enhanced through the provision of motorcycles to EPA staff and bicycles to front line extension staff and Lead Farmers. However, insufficient motorcycles were distributed and some supervisors had to instead use bicycles. Additional issues were fuel and maintenance.

preparation of the porridge and the CNP also checked what she had learned.

"[The] CNP asked, how many food groups were in the porridge and I said four food groups. Which groups? I have added sweet potato the group of staples, pumpkin, vegetable group, eggs, animal group and oil, oil group. And he asked from the six groups you learned which ones are left? Legumes and fruits, and he asked how was I going to add the fruit group, I said I will take the banana when the child finishes eating I will give him. Then the CNP said you have heard what we taught you."
(IYCF Grandmothers, FGD)

Extension staff were not as able to visit households: Implementation of household visits was not straightforward due to: lack of a monitoring form for CNPs to track how many household visits they had conducted; lack of time and financial resources for extension staff to undertake regular household visits; difficulties in coordinating date/time of the household visit with family members; and AEDOs had other commitments.

"We the supervisors and the CNPs are supposed to go and visit the mothers. Sometimes they could not work because of other programmes. Sometimes they became committed with other issues because we are government employed workers. When you need to go for supervision, you are in other activities. So for the AEDOs it was not easy to conduct the home visits but the CNPs were doing it."
(AEDOs, FGD)

CNP support from extension services was generally regarded as weak: CNPs were supposed to be regularly supported by different cadres of government staff (i.e. AEDOs/HSAs and AEDCs/AEHOs) to ensure that quality trainings were being undertaken in terms of identifying challenges, giving feedback and providing motivation, but this did not often happen.

Government struggles to conduct regular supervision and monitoring activities: Ideally, supervision should take place quarterly, but in reality it might only be once a year and all levels of the training cascade would have appreciated closer supervision. CNPs reported that caregivers and other community members were encouraged by closer supervision to take the IYCF nutrition education intervention more seriously.

"For it to work it's when we and they [the supervisors] coordinate, because in some sessions there is need for supervisors. Also, the women ... to encourage them it's when they see our superiors ... our bosses. [So when the women see them, they would think:] This thing is strong indeed."
(CNPs, Round two, FGD)

As a result of different cadres of government staff not undertaking supervision activities, this led to "mutual recriminations" and reduced motivation, e.g. community level staff were critical about not being supervised and advised by higher level staff, while higher level staff were critical of community level staff that were not available when they wanted to organize a supervisory visit.

Cross-sectoral supervision difficult: Supervision of staff from a different government sector challenged both their technical capacity and official reporting structures.

Lack of financial support for government to conduct additional monitoring: In the project design, supervision and monitoring responsibilities of government staff were unclear. Also, government-led supervision and monitoring activities were not organized due to a lack of resources, despite staff wanting to monitor how well the project was being implemented and to determine how well the farmers were fairing. Hence, government staff would sometimes join cross-sectoral supervision activities, which were organized by the IFSN District Nutritionist.

"We don't supervise, we don't monitor ... we are not given a chance or the resources to make sure we monitor whatever is being implemented."
(FNO, Interview)

The SHN Coordinator suggested that monitoring activities for different programmes in the same area are combined to reduce transport costs and save time, e.g. ToTs could monitor the CNPs and then go and monitor the schools.

“[If] we can just learn to mainstream these activities in our normal duty, I think we could be able [to do monitoring].”

(SHN Coordinator, Interview)

4.4.6 Sustainability and scale up

Very limited funding for nutrition activities:

Although the Government of Malawi is interested in continuing IYCF nutrition education activities, there are insufficient government funds allocated. When the government does send nutrition funds to the district, they are mixed in with other sector funds and generally absorbed for non-nutrition-related activities. Hence, this restriction of funds contributes to a reduction in trainings, supervision, monitoring and reporting activities. If government staff cannot be paid, then their participation rates in essential trainings would decrease.

MoAIWD’s Model Village approach might work:

By initiating competitions between communities, it may be possible to stimulate local actions, such as in the Model Village approach.

Not able to scale out to new areas without funding for training:

Without appropriate governmental support HSAs, AEDOs, AEHOs and AEDCs would struggle to continue project implementation. AEDOs admitted that they would not be able to undertake CNP trainings for Round three villages without the help of FAO, but would be able to expand from areas where CNPs were already trained.

Similarly, Group Village Heads doubted the continuation of the IYCF nutrition education intervention without FAO support, as training needed funds, even at the community level. In Round one IYCF villages, CNPs received MWK 28 000 during their 8-day training (MWK 3 500 per day to cover transport, food and overnight stays). After the training they are able to hold the IYCF nutrition education sessions with caregivers and other community members, but without training, they would be unable to do so.

“[The] government is always busy with many programmes but an NGO [stays] focused on one programme, and there is no corruption in the NGOs unlike the government where corruption is very high. They make false promises but when an NGO promises us something, they strive to make it happen.”

(Group Village Heads, FGD)

Linking caregivers with existing community institutions and livelihood security programmes:

The IFSN District Nutritionist felt that caregivers should be linked with existing community institutions and livelihood security programmes, such as village savings and loans (VSLs), so that women can access cash to purchase necessary recipe ingredients, which they cannot grow, such as eggs, oil and meat. The caregivers are also linked to a local market for surplus produce, such as Home Grown School Feeding (HGSF), their livelihoods are strengthened and they become empowered.



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5 Challenges

This section summarizes several key challenges that were identified, which related to: (i) targeting; (ii) coordination/collaboration; (iii) capacity building/training; (iv) implementation; (v) supervision, monitoring and reporting; (vi) behaviour change at the household level; and (vii) sustainability and scale up.

5.1 Targeting

Agriculture and food security interventions are too focused on staple food and rarely target households with children under 2 years of age:

The IFSN project did not initially include infants, young children and pregnant women in the vulnerability selection criteria to receive agricultural support; however, this was partially addressed in Round two. There was insufficient support for agricultural diversification based on the six food groups to enable dietary diversification in all homes, especially with regard to: diversified staples, fruits, vegetables, legumes and nuts, animal-source foods and fats.

Insufficient sensitization and follow up with Traditional Leaders and communities: In Round one, the trickle-down of information missed some key extension supervisors, front line extension staff, Group Village Heads and Village Heads, who were not sufficiently sensitized about the IYCF nutrition education intervention. Inadequate mobilization of community members led to issues with CNP recruitment and support, beneficiary selection, targeting of agricultural inputs and general understanding.

Not all CNPs were able to follow the selection criteria: CNPs found it difficult to exclude pregnant and lactating women (who did not have appropriately aged young children), while they were advised to encourage grandmothers, fathers, village authorities and other community members. This often led to more than 15 people participating in the IYCF care group, although not all were registered.

5.2 Coordination and collaboration

Vacant government staff positions and community volunteer turnover: High vacancy rates of front line extension staff (due to transfers and empty positions) and of government staff at the district level (i.e. FNO and DHO Nutrition) required other staff to undertake double duties, which reduced their ability to supervise and coordinate, respectively. In addition, there was no long-term strategy for periodically replacing (and training) community volunteers; being left in the hands of the village to decide.

DNCC not regularly convened - irregular meetings, low attendance: DNCC meetings were not regularly convened, participation of organizational representatives changes frequently and attendance is low when lunch and transport allowances are not provided; however, there are limited funds available to host the committee meetings (allowances, snacks, meeting folders).

DNCC and DEC communication weak: Because of the DEC and DNCC inactivity, there is weak communication with the DEC about nutrition activities and low quality nutrition interventions are neither being identified by the DNCC nor addressed by the DEC. There is no opportunity to ensure that all stakeholders follow national policy and support national programmes; particularly with NGOs as there is weak collaboration between NGOs and between NGOs, and the government.

Poor nutrition coordination at EPA level: At the EPA level, there is poor nutrition backstopping and coordination. There is no cadre with nutrition training at EPA level and with three or more HSAs to one AEDO, synchronization of activities is difficult, particularly as their operational areas do not overlap.

5.3 Capacity building/training

DSAs caused disruption: New DSAs required full board and direct payment to service providers for all trainings' meals and snacks, which was not easy to implement in rural communities where service providers that can take payments several weeks after providing services do not exist. Also, different development partners used a variety of "incentives" for participation and different DSA rates at the community level since the DSA policy only stipulates a level that is appropriate for national and district level trainings. This caused jealousy and competition between projects and deterred self-development.

CNP trainings not tailored to community level adult learning requirements: CNP trainings were not adequately designed for community level understanding. Eight days was insufficient for participants of CNP trainings to learn the new knowledge and skills. In Round two the joint trainings of different staff levels (e.g. CNPs and front line extension staff) inhibited understanding and proactive expression of CNP participants.

Limited assessment of pre-/post-training knowledge scores: Assessments of pre-/post-training knowledge scores for caregivers, CNPs and ToTs were conducted during Round one of the IYCF nutrition education intervention by IMCF

researchers. However, knowledge gaps for caregivers, CNPs and front line staff were not identified by programme staff in Round two.

Inadequate CNP facilitation skills: Some CNPs did not have adequate facilitation skills to conduct the IYCF nutrition education sessions. Hence, there is a need for following selection criteria and, pre-, in-service and refresher trainings to ensure that the CNPs have the necessary competence and confidence to be effective.

5.4 Implementation

Heavy workload of Government staff: Government staff managed many separate projects instead of projects that supported and eased government jobs. Staff were required to fulfil IFSN-related activities and duties for different NGOs (often involving the same front line staff), in addition to their general tasks, which created an unmanageable workload due to lack of coordination and streamlining.

Weak integration of nutrition-related topics into FFS and JFFLS: Front line extension staff in agriculture did not feel confident about integrating nutrition education and this was exacerbated by the lack of a FFS manual. In addition, owing to the lack of suitable kitchen facilities in primary schools, JFFLS facilitators were unable to conduct cooking classes with their learners to link the importance of agriculture production and dietary diversification by preparing fresh, diverse and nutritious meals from foods grown at the school.

Timing of IYCF nutrition education sessions during seasonal agricultural calendar: During the rainy season, attendance of caregivers, CNPs and front line extension staff at the IYCF nutrition education sessions decreased due to a conflict with agricultural activities. Therefore, sessions should be conducted at other times during the seasonal agricultural calendar.

Lower attendance of caregivers in the second IYCF care groups: In the second IYCF care groups there was much lower motivation to attend the IYCF nutrition education sessions. This was due to less support and external project incentives being received by these IYCF care groups while other

partners provided “incentives” to participate, and there were fewer caregivers available with appropriately aged children (6–18 months).

Low attendance of husbands: Despite being encouraged to participate in the IYCF nutrition education sessions, there was a low attendance of husbands, which was often explained by lack of time due to high workloads. Nutrition and caregiving are still perceived as a “female” responsibility, but many husbands were happy that their wives could participate and appreciated the new improvements in porridges.

5.5 Supervision, monitoring and reporting

Low government supervision and reporting: Government staff struggled to conduct regular supervision and reporting. Lack of logistic resources, e.g. fuel and vehicles was the biggest barrier. Government staff participated in “review” meetings, which were financed by the IFSN project, but were unable to do the regular programme monitoring in the villages. They also found that supervising staff from a different government sector (e.g. agriculture supervising health) challenged their technical capacity. In addition, conducting supervision and monitoring during the rainy season was difficult when the poor quality roads are difficult to use.

Lack of a simple standardized reporting form: ToTs, extension supervisors and front line extension staff did not have a simple standardized reporting form for supervision and monitoring activities. Also, some attendance registers were not well kept and do not reflect the reality at community level, thereby making it difficult to precisely determine participant attendance for the different IYCF nutrition education sessions. In addition, inconsistent record-keeping of agricultural input distribution impaired identification of overlap with IYCF nutrition education intervention beneficiaries.

Assessment of behaviour change and adoption of new practices: An accurate assessment of caregiver behaviour change and adoption of new IYCF practices was difficult, particularly as monitoring visits were planned in advance and

households were able to make special preparations for the visitors. A longer presence in communities is needed to reflect the social reality.

5.6 Behaviour change at household level

Lack of diverse ingredients, poor knowledge of food substitutes, food processing, storage and portion sizes: There was a lack of diverse ingredients at home for caregivers to put into practice what was learned. CNPs and caregivers had a poor understanding of food substitutes when a particular food was not available, and lacked skills for processing and storage to be able to utilize non-seasonal foods. CNPs and caregivers had difficulties in understanding how to adapt the recipes for age-appropriate portion sizes for children of different ages. Often, caregivers introduced family foods too early as they perceived their child as “too old” for porridge, even though they would still have benefitted from enriched porridge. In addition, some caregivers were anxious at being seen as different and mocked by community members for adopting new childcare and feeding practices.

5.7 Sustainability and scale up

Implementation of policies and strategies at district level: It has proved difficult in reality to put policies and strategies into action at district, area and community levels because of lack of dissemination, funding and monitoring.

Nutrition is still considered as a health issue: Nutrition is still considered as a health sector responsibility rather than an issue for many sectors and food-based, preventative approaches are not usually promoted by the health sector.

Perception that IYCF activities are project-based: There is a perception that the IYCF nutrition education activities are project-based rather than an on-going programme that government and communities need to take responsibility for implementing, supervising, monitoring and reporting activities.

Lack of government resources for nutrition programmes: There is a lack of government resources for implementing nutrition programmes to scale: pre-service and in-service trainings, materials, field support and supervision, monitoring and reporting.



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6 Successes

This section summarizes key successes, which include: (i) working in strong partnership with the government; (ii) IEC Materials; (iii) IYCF capacity building; (iv) creating a gender-sensitive learning environment; (v) inclusion of grandmothers; and (vi) providing a practical learning environment.

6.1 Strong partnership with the government

Strengthening existing extension systems: The IFSN project worked in strong partnership with the government by strengthening the existing extension systems (in agriculture, health, education and local government) and the community, which helped to promote ownership of project support, especially in Round two, and additional improvements were planned for Round three.

6.2 IEC materials

Jointly developed and adapted: IEC materials were jointly developed and adapted with all levels of project and government staff.

Integrated into national IEC materials: Parts of the IYCF counselling booklet and food education tools were integrated into the national standardized counselling card collection.

6.3 IYCF capacity building

Cross-sectoral IYCF trainings: The nutrition education component supported cross-sectoral IYCF trainings to capacity build staff in the agriculture and health extension systems: (i) ToTs (mixture of agriculture and health staff at all levels as well as education and community development); (ii) 2-day sensitization with extension supervisors (AEDCs/ AEHOs); (iii) Front line extension staff (AEDOs/ HSAs); and (iv) CNPs (Lead Farmer and CHVs).

6.4 Creating a gender-sensitive learning environment

Working with female CNPs and small peer groups of women: The project successfully worked with female CNPs at community and district levels to create a gender-sensitive learning environment. It was found that women felt comfortable in small peer groups and this formed the basis of the IYCF care groups with 15 caregivers.

6.5 Inclusion of grandmothers

Grandmothers became staunch advocates of enriched porridge: The IYCF nutrition education intervention strongly supported the inclusion of grandmothers. Once they realized the benefits of the IYCF nutrition education sessions, grandmothers became staunch advocates of improved childcare and feeding practices.

6.6 Providing a practical learning environment

Greater confidence and competence to prepare improved recipes at home: By providing a practical learning environment in the IYCF nutrition education sessions, caregivers were able to apply what they had learned in participatory cooking session and more easily memorized the improved complementary feeding recipes. Consequently, some of the caregivers felt confident to cook at home with their mothers (in-law) and share their knowledge and experiences.



7 Recommendations

This section highlights a number of recommendations, based on lessons learned from the challenges and successes, to ensure the effective linking of agriculture and nutrition education to improve nutrition outcomes of young children and their families.

1. Consider the complexity of the socio-cultural context when designing/ implementing projects:

The IFSN project conducted TIPs and results fed into the design of the IYCF nutrition education intervention. The formative research identified improved complementary feeding recipes that were affordable, feasible and culturally acceptable, and, therefore, more likely to be adopted by caregivers. When planning integrated agriculture-nutrition interventions on complementary feeding (or other nutrition activities), all family members (school age, youth, mothers, grandmothers, husbands, grandfathers) should be considered as childcare and feeding cuts across generations and genders. Households are complex, inter-generational and gendered structures influenced by intra- and inter-household power relations.

2. Advocate for food-based and dietary approaches that are possible and feasible, and can make a difference with embolden support:

The government needs to strengthen nutrition funding in the agriculture, health, education and community development

budgets, and strengthen the integration of food-based, preventative approaches into agriculture, health, education, community development and the overall nutrition policies to support the production of diverse nutrient-dense foods according to the six food groups and seasonal agricultural calendar. Key to improving diets is better demand for nutritious foods and one of the important interventions, in addition to improving the food supply, is to educate the general public on healthy nutrition.

3. Step-up advocacy and sensitization of government, front line extension staff, local leaders and community members to encourage participation, ownership and empowerment:

It is important that different stakeholders are aware of the increased vulnerability of households with young children; the need to target them with agricultural support; to first diversify agricultural production and then balance agriculture as a business with agriculture for family consumption; and to capitalize on nutrition entry points (i.e. FFS, JFFLS, health centres, primary and secondary schools, IYCF nutrition education graduations) in order to strengthen food-based approaches for improved quality of complementary feeding and diversified family diets.

4. Develop a comprehensive, continuous food-based nutrition training system for agriculture, health and community

development extension systems, and primary and secondary education systems:

This will ensure that nutrition activities, particularly nutrition education, are integrated and applied in daily work and everyday life. Hence, it is important to continue to develop and incorporate additional IYCF modules into trainings of caregivers and CNPs using the local language, such as basic human nutrition; agricultural diversification; food budgeting based on food groups; family foods and diets; integration of nutrition into health; and environmental sustainability. It is also necessary for communities to select CNP replacements well and, with extension services, to build the capacity of new CNPs. The government should strengthen pre- and in-service training for all CNPs, front line extension staff and supervisors from agriculture, health and community development sectors, and to improve curricular and teacher training for primary and secondary education (home economics, nutrition, childcare knowledge/skills).

5. Provide timely nutritionally-appropriate agricultural support to families with young children:

For agriculture to have an impact on nutrition, there is an urgent need to ensure the timely provision of nutritionally-appropriate agricultural support (education, targeting diverse input support where needed) to families with young children and pregnant women according to the seasonal agricultural calendar. This needs to be harmonized with health and nutrition education interventions, so that IYCF nutrition education beneficiaries can effectively utilize their agricultural inputs, cultivate diversified crops and small livestock of high nutritional value, and apply new knowledge and skills to prepare nutritious foods for their families. Linking caregivers to existing community institutions and livelihood security programmes would ensure sustainability.

6. Strengthen the role of the DNCC and DEC in nutrition advocacy and to create a strong platform for nutrition:

It is necessary to empower the DNCC to hold regular meetings, and to make and implement nutrition programming decisions through the DEC, so that nutrition is considered a multi-sectoral issue and not just a health sector responsibility.

7. Improve IYCF nutrition education sessions focusing on food-based approaches and local foods, so that they meet specific learning needs of different levels, complement other community activities and are periodically upgraded:

It is important to foster understanding and proactive participation at all training levels by using adult learning techniques, longer training sessions (or phased training), and repetition; to include different family members, such as grandmothers and men, and other interested community members, such as pregnant women; and to avoid major events or seasons with peak workloads. Hence, the optimal timing for IYCF nutrition education sessions in Malawi is between May and October. IEC materials should be evidence-based, in-line with government messages and "fine-tuned" through reviews.

8. Provide participatory community-based IYCF nutrition education that offers opportunities for practical learning, to ensure behaviour change:

It was noted that caregivers learned better when they applied their new knowledge in participatory cooking sessions and substitution options in recipes were essential, depending on the seasonal agricultural calendar, to provide locally available fresh, nutritious foods. Since training venues were not always carefully selected, it was suggested to emphasize model cooking areas at section level: selecting a "greener" site sheltered from wind and dust, close to a safe source of drinking water, using fuel-efficient stoves and creating a compost to recycle all kitchen resources (water and organic matter).

9. Include recipes for improved family meals to strengthen overall family nutrition education:

It is important to facilitate the transition of young children from enriched porridge to nutritious family food and to promote consumption of a healthy diet by all family members, which includes a balance of foods from all food groups.

10. Revisit the Farm Home Assistant concept at EPA level:

This position existed in the 1990s, and earlier, and brought nutrition skills and knowledge to the extension level. The reintroduction of skilled nutrition extension staff would undoubtedly strengthen the team of front line extension staff to ensure that sectors are backstopped more readily and a greater number of families are reached with nutrition advice.

11. Review, clarify and organize projects to better support and streamline the workload of government staff, and provide all the necessary resources and tools:

It is important to ensure that government staff are better able to carry out implementation, supervision, monitoring, data management and reporting. Staff and communities need an effective monitoring and evaluation system, which involves collecting timely information for action and keeping accurate records.

12. Review DSA and external incentive regulations for rural sites, which all development partners adhere to:

In order that government staff and front line extension staff participate in trainings and other activities in a coordinated/ collaborative manner, transparency of DSA rates and providing external incentives for participation is essential.

Annex 1: Process review participants

Name	Position	Organization	District
Stacia NORDIN	Nutrition Officer (Food Security and Policy)	FAO	Lilongwe
Wells KUMWENDA	IFSN Project Coordinator	FAO	Kasungu
Soka CHITAYA	IFSN District Manager, Kasungu	FAO	Kasungu
Benjamin MTIKA	IFSN District Manager, Mzimba	FAO	Mzimba
Lawrence CHAKHOLOMA (late)	IFSN District Nutritionist	FAO	Kasungu
Marion SANUKA	Field-based Research Assistant	FAO	Kasungu
Charles MAKUYA	Office-based Research Assistant	FAO	Kasungu
Kondwani MPENIUWAWA	Chief Nutrition and HIV Officer	MoH DNHA	Lilongwe
Janet GUTA	Deputy Director Clinical Nutrition	MoH	Lilongwe
Tapiwa NGULUBE	Chief Nutrition Officer	MoH	Lilongwe
Martha MWALE	Principal Food and Nutrition Officer	MoAIWD	Lilongwe
Norton MSISKA	Project Manager	Malawi Enterprise Zone Association (MALEZA)	Kasungu
Mable LUNGU	Project Manager	Feed the Children	Mzimba
Agnes MOYO	Programme Manager Mzuzu ADD	MoAIWD	Mzuzu
Justice MUNTHALI	FNO Mzuzu ADD	MoAIWD	Mzuzu
Ernest KAPHUKA	DPD	MoLGRD	Kasungu
Jackson MKOMBEZI	DADO	MoAIWD	Kasungu
Gertrude MOYO	Acting DHO	MoH	Mzimba
Takondwa MINJALE	FNO	MoAIWD	Mzimba
Peter KAMULONI	ToT EHO and District SUN focal person	MoH	Kasungu
Florence KASIYA	SHN Coordinator	MoEST	Kasungu
Alexander KADAMMANJA	Senior AEHO	MoH	Mzimba
Onex MTENGAPONJI	AEDC	MoAIWD	Kasungu
Sothini JERE	AEHO Health Centre	MoH	Mzimba
Evance GONDWE	AEDO, Field-based ToT	MoAIWD	Mzimba
Mathews NYIRENDA	AEDO, Field-based ToT	MoAIWD	Mzimba
Vanex CHITETE	AEDO	MoAIWD	Kasungu
Brave MOYO	AEDO	MoAIWD	Kasungu
Modester MWALE	AEDO	MoAIWD	Kasungu
Ellen NGOMA	AEDO	MoAIWD	Kasungu
Dokiso LONGWE	HSA	MoH	Mzimba
Lonia NDHLOVU	HSA	MoH	Mzimba
Mary NKHAMBULE	HSA	MoH	Mzimba
Magret KAWAZA	JFFLS Facilitator, School Teacher	Kasamba F.P. School	Kasungu

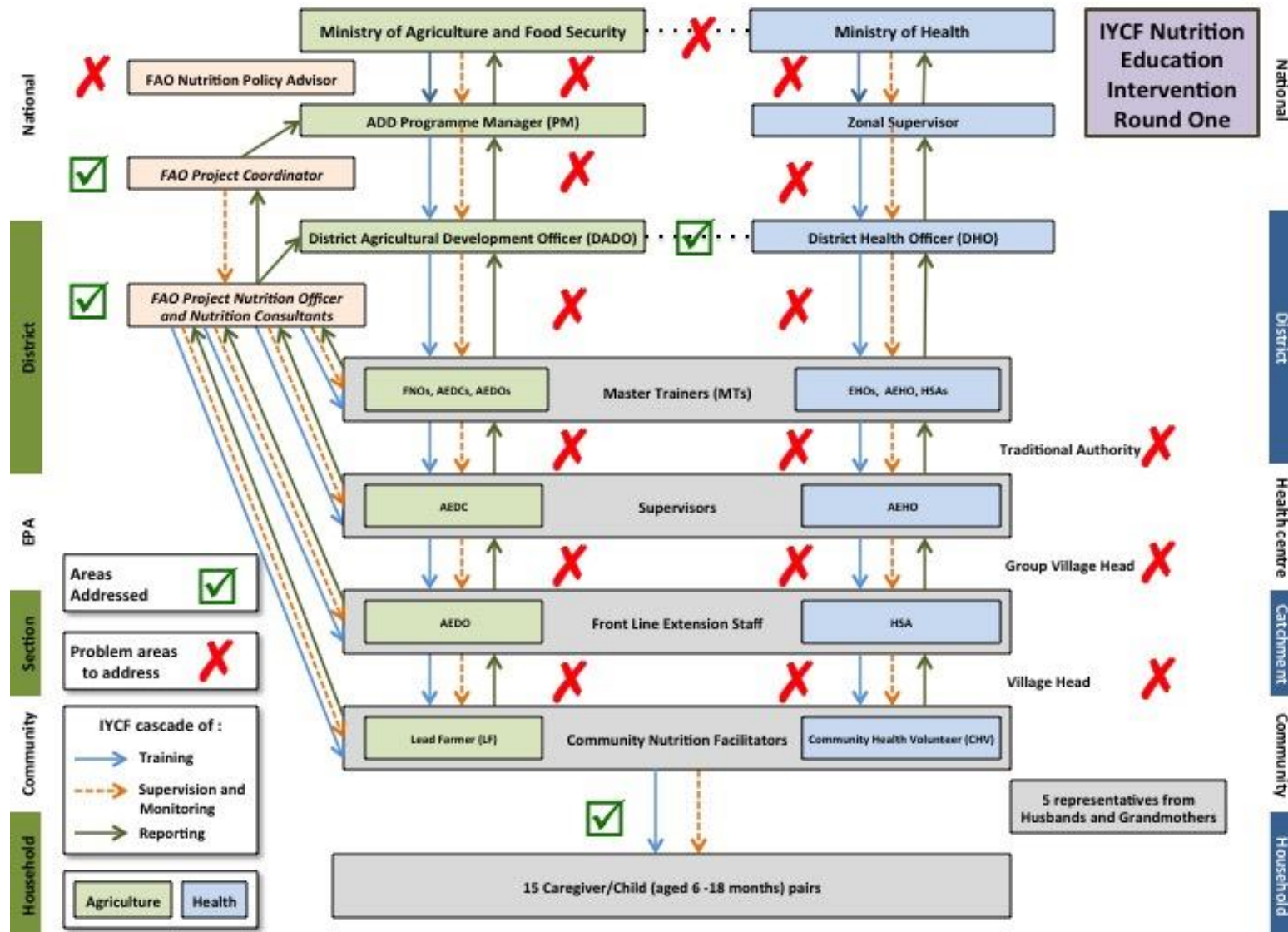
Note: Other participants included: Group Village Heads; CNPs (Lead Farmers and CHVs); Grandmothers, who participated in IYCF nutrition education sessions; Grandmothers with daughters/daughters-in-law, who participated in IYCF nutrition education sessions; caregivers, who participated in IYCF nutrition education sessions; husbands, whose wives had participated in IYCF nutrition education sessions; and JFFLS learners.

Annex 2: Overview of data collection schedule

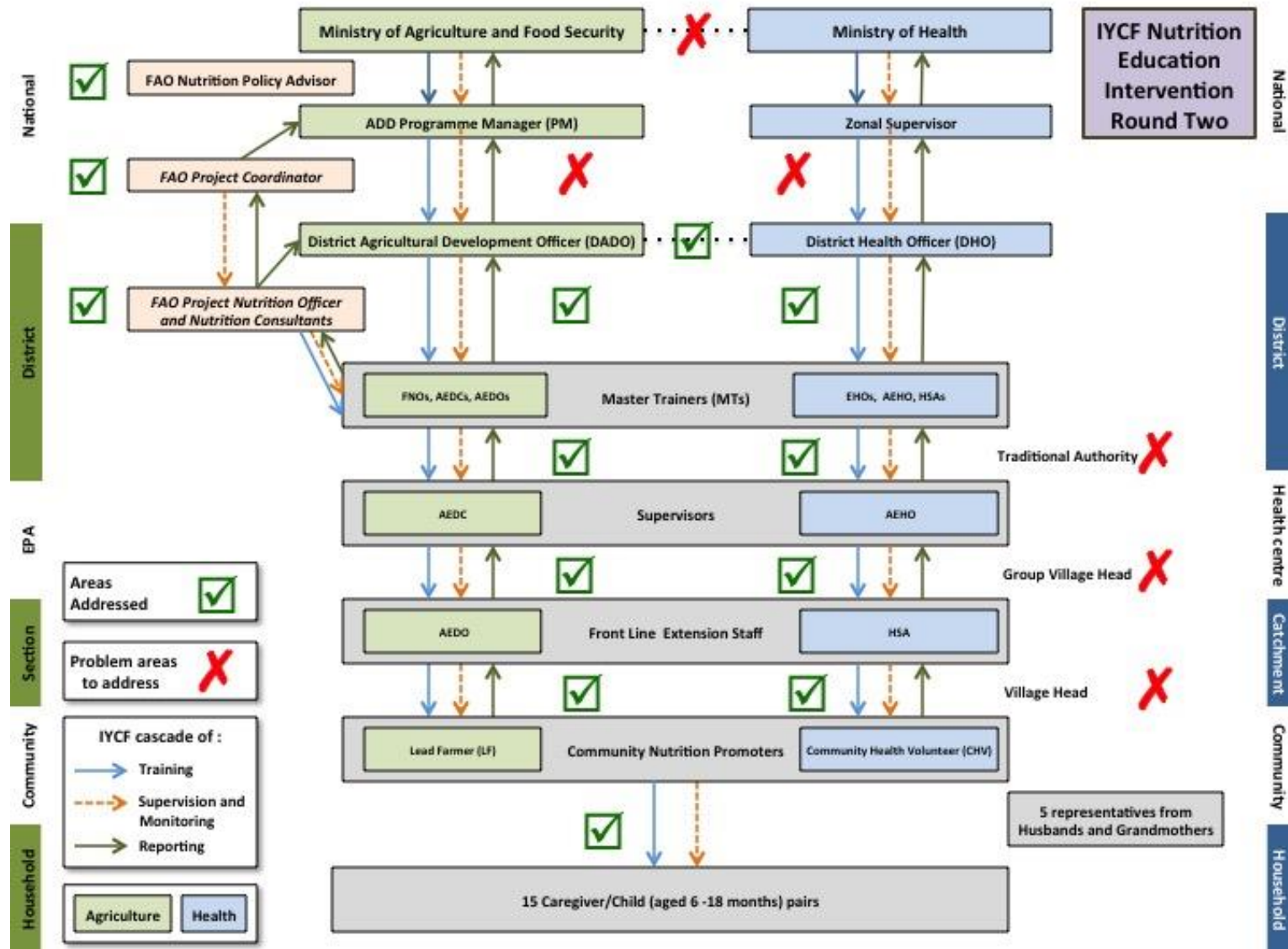
Date	Activity	Participants	District
29 September 2014	FGD	AEDOs (Round one and Round two)	Kasungu
30 September 2014	Interview	AEDC	Kasungu
30 September 2014	FGD	CNPs (Round one and Round two)	Kasungu
1 October 2014	Interview	DADO	Kasungu
1 October 2014	Interview	MALEZA Project Manager	Kasungu
2 October 2014	Interview	Feed the Children Project Manager	Mzimba
2 October 2014	Interview	Programme Manager Mzuzu ADD	Mzuzu
2 October 2014	FGD	Mothers (Round one Group one)	Kasungu
2 October 2014	FGD	Mothers (Round one Group two)	Kasungu
3 October 2014	FGD	Group Village Heads (Round one and Round two)	Kasungu
3 October 2014	Interview	Acting DHO	Mzimba
3 October 2014	Interview	IFSN District Manager, Mzimba	Mzimba
6 October 2014	Interview	IFSN Project Coordinator	Kasungu
6 October 2014	Interview	IFSN District Nutritionist	Kasungu
7 October 2014	Interview	IFSN District Manager, Kasungu	Kasungu
9 October 2014	Interview	Nutrition Officer (Food Security and Policy)	Lilongwe
9 October 2014	FGD	National Government Nutrition Focal persons	Lilongwe
11 October 2014	FGD	Mothers unsuccessful village*	Kasungu
11 October 2014	Interview	CNPs unsuccessful village	Kasungu
11 October 2014	FGD	IYCF Grandmothers	Kasungu
13 October 2014	Interview	AEHO Health Centre	Mzimba
14 October 2014	Interview	Senior AEHO	Mzimba
14 October 2014	Interview	FNO Mzuzu ADD	Mzuzu
15 October 2014	Interview	FNO	Mzimba
15 October 2014	HH visits	Mothers	Mzimba
16 October 2014	HH visits	Mothers	Kasungu
17 October 2014	Interview	DPD	Kasungu
17 October 2014	Interview	SHN Coordinator (Part one)	Kasungu
17 October 2014	FGD	JFFLS Learners	Kasungu
17 October 2014	Interview	JFFLS Facilitator	Kasungu
20 October 2014	FGD	CNPs (Round two)	Mzimba
20 October 2014	FGD	Mothers (Round two Group one)	Mzimba
21 October 2014	FGD	Related Grandmothers	Mzimba
21 October 2014	FGD	Related Husbands	Mzimba
22 October 2014	FGD	HSAs	Mzimba
22 October 2014	Interview	AEDOs (Field-based ToTs)	Mzimba
23 October 2014	Interview	SHN Coordinator (Part two)	Kasungu
24 October 2014	Interview	ToT EHO/ District SUN Focal person (representing District-based ToTs)	Kasungu

Note: A village was considered “unsuccessful” if the IYCF care group had not completed all ten IYCF nutrition education sessions.

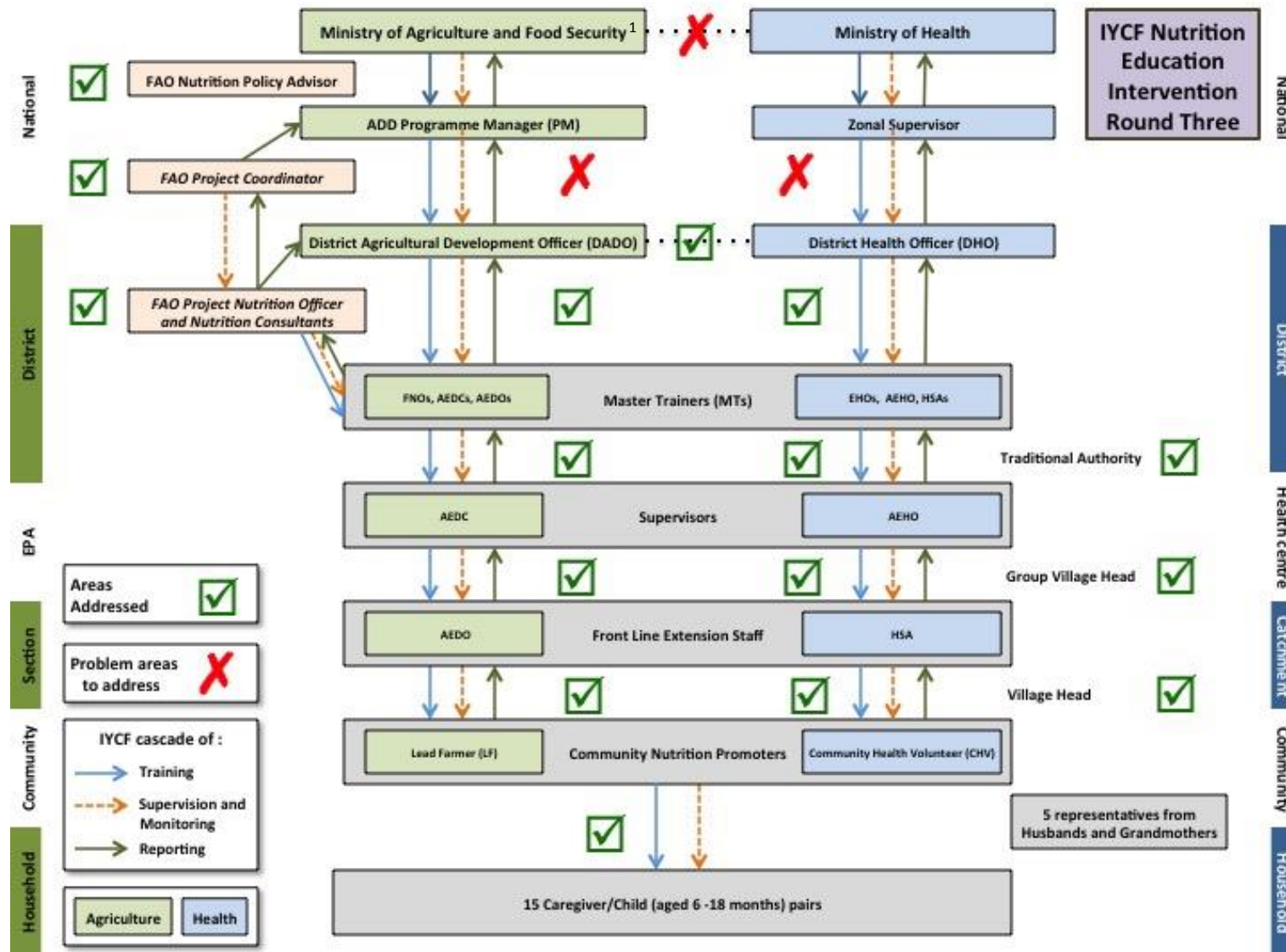
Annex 3: IYCF nutrition education intervention training cascade – round one



Annex 4: IYCF nutrition education intervention training cascade – round two



Annex 5: IYCF nutrition education intervention training cascade – round three plans



¹ Became Ministry of Agriculture, Irrigation and Water Development.

Annex 6: Overview of IYCF nutrition education sessions

- SESSION 1: Continuation of breastfeeding, hand washing and food safety**
Topic 1 a: Continuation of breastfeeding
Topic 1 b: Hand washing
Topic 1 c: Food safety
- SESSION 2: Complementary feeding ages, porridge consistency**
Topic 2 a: Complementary feeding at 6 months
Topic 2 b: Complementary feeding at 7–8 months and 9–11 months
Topic 2 c: Complementary feeding at 12–23 months
Topic 2 d: Consistency of porridge
* Participatory cooking session one – based on recipe book
- SESSION 3: Malawi six food groups, seasonal food availability calendar**
Foods for each food group
- SESSION 4: Family meals and how they affect child nutrition**
* Participatory cooking session two – based on recipe book
- SESSION 5: Vegetables, fruits and other healthy snacks**
Food group examples, processing and preservation
- SESSION 6: Legumes and nuts**
Food group examples and processing
* Participatory cooking session three – based on recipe book
- SESSION 7: Animal-source foods**
Food group examples and processing
* Participatory cooking session four – based on recipe book
- SESSION 8: Feeding the sick child, prevention, danger signs of illness**
- SESSION 9: Overall review of all the eight sessions and preparation for the graduation session**
- SESSION 10: Graduation**
Food group examples
* Cooking session five – examples of all recipes – to prepare a display for the community of what was learned

Annex 7: Nutrition coordination in Malawi, October 2014

NATIONAL	Overall Coordination	Department of Nutrition, HIV and AIDS (DNHA) <i>(reports to Minister of Health)</i>				
		- Director of Nutrition (DN)	- Deputy Director Nutrition (DDN)	- Chief Nutrition Officer (CNO)	- Principal Nutrition Officer (PNO)	
	Key Nutrition Sectors and National Leaders	Ministry of Local Government and Rural Development (MoLGRD)	Ministry of Agriculture, Irrigation and Water Development (MoAIWD)	Ministry of Health (MoH)	Ministry of Education, Science and Technology (MoEST)	Ministry of Gender, Children, Disability and Social Welfare (MoGCDSW)
		- DDN	- DDN - CNO - PNO	- DDN - CNO - PNO	- DDN - CNO - PNO	- DDN - CNO - PNO
	Regional	None	Agricultural Development Division	Health Zones	Education Divisions	None
			- Programme Manager (PM) - Food and Nutrition Officer (FNO)	- Zonal Supervisor	- Division Manager (DM) - School Health and Nutrition (SHN) Focal Point	
DISTRICT	District Coordination	District Commissioner	District Executive Committee (DEC) District Nutrition Coordination Committee (DNCC)			
	District Nutrition Team	- Director of Planning and Development (DPD)	- District Agricultural Development Officer (DADO)	- District Health Officer (DHO)	- District Education Manager (DEM)	- District Social Welfare Officer (DSWO) - District Community Development Officer (DCDO)
		- District Nutrition Officer <i>Pending arrival Interviews done in 2014</i>	- FNO - Crops Officer - Livestock Officer	- District Nursing Officer (DNO) - Nutritionist - Maternal and Child Health (MCH) - Environmental Health Officer (EHO)	- SHN Coordinator	
AREA / TA	Area Coordination	Traditional Authority (TA) Group Village Head (GVH)	Area Development Committee (ADC) Community Leaders for Action on Nutrition (CLAN)			

Lessons learned from a process review of a food security and nutrition project in Malawi

	Extension Supervisors		- Agriculture Extension Development Coordinator (AEDC)	- Clinical Officer (CO) - Medical Assistant (MA) - Nurse - Assistant Environmental Health Officer (AEHO) - Health Assistant (HA)	- Primary Education Advisor (PEA)	- Social Welfare Assistant (SWA) - Zone Supervisors
COMMUNITY	Community Coordination	Village Head (VH)	Village Development Committee (VDC) Community Action on Nutrition (CAN)			
	Front Line Extension		- Agriculture Extension Development Officer (AEDO)	- Health Surveillance Assistant (HSA)	- Teacher	- Community Development Assistant (CDA)
	Community Volunteers		- Lead Farmers (LF), crops/livestock/nutrition - Farmer Groups - Farmer Field Schools (FFS)	- Community Health Volunteer (CHV) - Growth Monitoring Volunteer (GMV)	- Parent Teacher Association (PTA) - School Management Committee (SMC) - Junior Farmer Field and Life Schools (JFFLS)	- Community-Based Organization (CBO) - Community-Based Childcare Centre (CBCC) - Village Savings and Loan group (VSL)
	Community Members	- Household Head	- Households - Focus on: Families with Pregnant and Lactating Women and/or Children under 2 years of age			

Source: Ms Stacia Nordin



Eat a variety of foods every day