Final Report

A SITUATION ANALYSIS OF NUTRITION IN ETHIOPIA

POLICY AND PROGRAM OPTIONS

BJORN LJUNGQVIST

WITH SUPPORT FROM
ELENI ASMARE

AUGUST 2015

SUMMARY AT A GLANCE

Ethiopia's success: pro-poor and gender sensitive policies with strengthened program implementation

"upstream"

Policy

- Pro-poor National Growth and Transformation Plan
- Comprehensive Multi-sectoral National Nutrition plan
- Improved conditions for women (education, reduction of early marriage' etc.)
- Rapid and equitable economic development
- Rapid and equitable expansion of social services (health, WASH, education…)
- Effective 'disaster risk management'
- Nutrition-sensitive safety net: food/cash to chronically food insecure households
- Free access health services (ITNs, pneumonia/diarrhea treatment, FP)
- Expansion of community-based nutrition program (incl. GMP)
- Scale-up nutrition-specific interventions: micronutrients, CMAM, IYCF

Programme

"downstream"

LIST OF ACRONYMS AND ABBREVIATIONS

ABE	Alternative Basic Education
AGP	Agricultural Growth Program
ANC	Antenatal Care
APA	Agriculture Potential Area
CBN	Community Based Nutrition
CBO	Community Based Organization
CCA	Climate Change Adaptation
CFI	Chronic Food Insecure
CLTSH	Community-Led Total Sanitation and Hygiene
CMAM	Community-based Management of Acute Malnutrition
CP	Child Protection
DA	Development Agent
DHS	Demographic and Health Surveys
DRM	Disaster Risk Management
DRMFSS	Disaster Risk Management and Food Security Sector
DRS	Developing Regional States
DSW	German Foundation for World Population
ECCE	Early Childhood Care and Education
ECD	Early Childhood Development
ECHO	The European Commission's Humanitarian Aid and Civil Protection department
EHNRI	Ethiopia Health and Nutrition Research Institute
ENA	Essential Nutrition Action
ENGINE	Empowering New Generations to Improve Nutrition and Economic opportunities
EOS	Enhanced Outreach Strategy
EPHI	Ethiopia Public Health Institute
ENS	Essential Nutrition Supply
ESPD	Education Sector Development Plan
EU	European Union
EU+	European Union Member States represented in Ethiopia plus Norway
FAL	Functional Adult Literacy
FTC	Farmer Training Center
GAM	Global Acute Malnutrition
GDP	Gross Domestic Product
GEQIP	General Education Quality Improvement Programme
GMP	Growth Monitoring and Promotion
GoE	Government of Ethiopia
HABP	Household Asset Building Program
HDA	Health Development Army
HC	Health Center
HEP	Health Extension Program
HEW	Health Extension Workers
HHFS	Household Food Security
HP	Health Post
HRD	Humanitarian Resource Document
iCCM	Integrated Community Case Management
IDP	Internally Displaced Person
IEC	Integrated Early Childhood

IFA	Iron Folic Acid
IFAE	Integrated Functional Adult Education
IFPRI	International Food Policy and Research Institute
IMNCI	Integrated Management of Newborn and Child Illness
IP	Implementing Partner
IRT	Integrated Refresher Training
ITP	Integrated Training Programme (for HEW)
IYCF	Infant and Young Child Feeding
JAP	Joint Action Plan
KAP	Knowledge, Attitudes and Practices
LRRD	Linkage of Relief and Recovery to Development
M&E	Monitoring and Evaluation
M2M	Mother-to-Mother Support Group
MAM	Moderate Acute Malnutrition
MIS	Management Information System
MoA	Ministry of Agriculture
MoCYWA	Ministry of Children, Youth and Women Affairs
MoE	Ministry of Education
MoH	Ministry of Health
MoLSA	Ministry of Labor and Social Affairs
MUAC	Mid Upper Arm Circumference
MUS	Multiple Use Service
MVH	Most Vulnerable Household
NCB	Nutrition Coordination Body
NCBNP	National Community Based Nutrition Protocol
NCD	Non Communicable Disease
NGO	Non Governmental Organization
NNP	National Nutrition Program
NTC	Nutrition Technical Committee
ODA	Official Development Assistance
ODF	Open Defecation Free
OFSP	Other Food Security Program
OTP	Outpatient Therapeutic Program
OWNP	One WASH National Program
PLW	Pregnant and Lactating Women
PNC	Postnatal Care
PSNP	Productive Safety Nets Program
REACH	Renewed Efforts Against Child Hunger and undernutrition
RUTF	Ready to Use Therapeutic Food
SAM	Severe Acute Malnutrition
SBCC	Social Behavioral Change Communication
SITAN	Situation Analysis
SNNPR	Southern Nations, Nationalities, and Peoples' Region
SP	Social Protection
SUN	Scale-Up Nutrition
SW	Social Worker
TSF	Targeted Supplementary Feeding
UN SCN	The United Nations Standing Committee on Nutrition
UNDP	The United Nations Development Programme
UNICEF	The United Nations Children's Fund
WASH	Water, Sanitation and Hygiene

WB	The World Bank
WDA	Women's Development Army
WHO	World Health Organization

TABLE OF CONTENTS

1. Background

Early in 2013, the European Union Commission along with the 20 EU Member States represented in Ethiopia plus Norway (EU+) endorsed the ***EU+ Joint Cooperation Strategy for Ethiopia*** to ensure a coherent and cohesive response to Ethiopia's development challenges, to improve alignment, harmonization, results-based approach, predictability and transparency, whilst avoiding overlapping or fragmented interventions. This process is expected to lead progressively towards a framework for Joint Programming in Ethiopia by the year 2016.

In preparation for the joint programming status by 2016, the EU+ partners agreed to explore the interest and possibility to launch a pilot joint action in a cluster sector of common interest. The theme of nutrition was selected as one of the pilot actions to test the feasibility of joint, collaborative programming. The EU+ support would become a part of the Ethiopia National Nutrition Plan, NNP, which was concurrently being updated and this fact is consequently offering an excellent opportunity for harmonization of the EU+ initiative into national nutrition planning, resourcing and implementation.

In view of the above considerations, the EU+ partners in Ethiopia contacted the UNICEF Ethiopia Country Office requesting them to undertake an extended analysis of the nutrition situation in Ethiopia with special focus on trends and determinants of nutrition developments during 2000-2014. UNICEF in turn contracted Tulane University and an independent consultant, B. Ljungqvist, to carry out the study. The whole exercise is henceforth referred to as 'SITAN'.

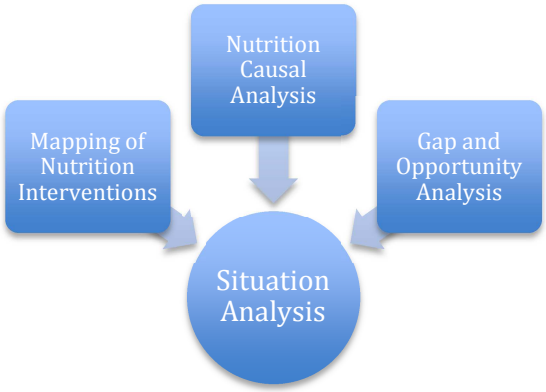
This report summarizes the work of the independent consultant with special emphasis on a gap and opportunity analysis of policy and program options. The report also includes a summary of the overall findings and recommendations. The extensive analytical work carried out by the Tulane University team is presented separately[1].

Objectives of the Situation Analysis:

1. Generate a better understanding of the different risk factors and causal pathways affecting undernutrition in women and children across contrasting livelihood zones in Ethiopia
2. Analysis of existing mapping information of nutrition programming and recommend improved methods
3. With reference to the causal analysis and the mapping exercise, identify the gaps in nutrition related interventions and resources in areas of Ethiopia affected by chronic and acute undernutrition

[1] Mason JB, Potts KS, Crum J, Hofer R and Saldanha L. A Situation Analysis of the Nutrition Sector in Ethiopia. A report to UNICEF and EU. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2015.

The four major components of the SITAN update:



Out of the four components shown above, the Tulane University group, under leadership of Professor John B. Mason, was responsible for carrying out the Nutrition Causal Analysis, the Mapping of Nutrition Interventions and the related parts of the Gap and Opportunity Analysis. The results and recommendations of this work has been presented in a comprehensive report: *A Situation Analysis of the Nutrition Sector in Ethiopia*, hereafter referred to as the **Tulane Complementary Analytical Report.**

The remaining part of the work, including Literature Review, Gap and Opportunity Analysis of defined policy and program issues as well as the concluding Summary of Findings and Recommendations was completed by the author and is presented in this report. Some data collection steps were contributing inputs to both the **Tulane Complementary Analytical Report** as well as the present report. These include the case studies/field visits and related Key Informant interviews and also the overview of NNP Strategic Objectives and Initiatives (Annexes 2-5). Jennifer Crum and Eleni Asmare were primarily responsible for planning and reporting of these activities and the author gratefully acknowledges their work while remaining solely responsible for the use of this information in the present report.

A section discussing the conceptual framework for nutrition causality analysis and how this applies specifically to chronic undernutrition, stunting, has been added to explain the theoretical basis and assumptions of many of the conclusions arrived at.

Micronutrients: Micronutrient deficiencies are, indeed, important aspects of a situation analysis of the nutrition situation. However, at the planning and start-up of the present SITAN work it was recognized that existing information on micronutrient deficiencies in Ethiopia was rather outdated and that a comprehensive, national *micronutrient deficiency survey* was due to be initiated during the first half of 2015. Hence, it was decided that a comprehensive review of *micronutrient deficiencies,* including trends and gap and opportunity analysis should be undertaken based on the forthcoming data from this survey. These issues are consequently not addressed in the present report apart from some discussions on health-based micronutrient supplementation (Vitamin A Capsule and Iron/Folate Acid, see Section 4.2.1) and – in a more general way – as it relates to dietary diversity.

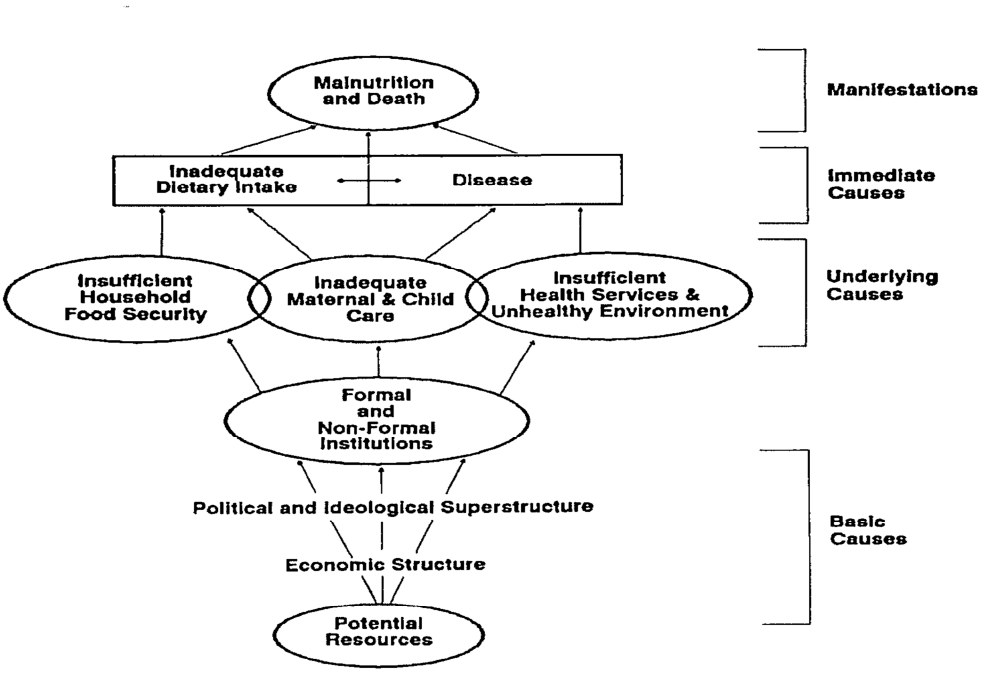
2. A Note on Conceptual Approach for Causality Analysis of Stunting Developments in Ethiopia.

The Terms of Reference for the present SITAN exercise, explicitly requests that the causal analysis of nutrition problems in Ethiopia adopts the conceptual framework for nutrition causality analysis as

proposed by UNICEF in 1990[2] and which is still almost universally accepted and used by nutrition scholars and practitioners. The original version of this conceptual framework is shown below.

Figure: The UNICEF Conceptual Framework for Causality Analysis, 1990

[2] UNICEF. Strategy for Improved Nutrition of Children and Women in Developing Countries. UNICEF, New York: 1990.



This conceptual framework has undergone a series of permutations and developments during the years but, in most cases, the fundamental principles of three distinct levels of causes and the 'food', 'health' and 'care' construct of underlying conditions (see below) have been retained unchanged. The version of the causality framework adapted to long-term impact of chronic undernutrition in the 2008 Lancet series is included in Annex 1.

For purpose of the ensuing discussion of causes to malnutrition in Ethiopia it is important to highlight a few aspects of this conceptual framework:

a) Maybe most importantly: the original UNICEF 1990 strategy clearly explains that a causality analysis should be part of an ongoing Assessment-Analysis-Action, Triple-A cycle, because 'nutrition in society' is a complex process[3] where the causal patterns are likely to be changing in ways that are not predictable and, hence, need to be regularly assessed and analyzed in order to ensure effective actions.
b) the important principle of "food", "health" and "care" as necessary but each by itself not sufficient conditions for adequate nutrition is usually misunderstood leading to situations where nutrition programs include some activities in each of these areas without making sure that the

[3] Ljungqvist B and Jonsson U. Nutrition Information Systems in Complex Societies. Statement at the FANUS African Nutrition Conference; supplementary materials: 2015.

right action reaches the right mother/child at the right time, i.e. when this particular condition is the reason for nutritional risk.

c) "Food", "health" and "care" all require resources and in resource-poor households, communities and countries you will often see a competition for fulfillment of these conditions, e.g. food production may require labor that undermine mothers' ability to feed their children and keep them clean, etc. The only way to address these competing needs is to improve the resource base, i.e. the basic causes, however…

d) Almost invariably, causal analysis exercises do not address the important "basic" causes of the conceptual framework; often treating these issues as a given 'enabling environment' but rarely explicitly addressing issues like inequities and inequalities in access to resources and services, social exclusion, etc.

An 'added value' of adopting the conceptual framework as depicted above is that it brings clarity in design of programs and the corresponding monitoring and evaluation frameworks. Hence, as stunting reduction is presently the main focus of many new initiatives in nutrition programming, great efforts are made, including this SITAN study, to link stunting developments to potential causal factors or 'drivers' by applying different 'correlational analysis' methods. The conceptual framework should guide these efforts to ensure proper categorization of variables (not comparing apples and fruits!) and separating potential causal links between different causal levels. For example, Bhutta and team[4] suggest that WASH, diarrheal diseases and zinc deficiency are each critical intervention areas for stunting prevention in Ethiopia while it is obvious that these are closely related factors/interventions at different levels of the stunting causal chain which should be considered together in efforts to break this particular pathway of stunting outcomes.

It would be of particular importance to be able to relate 'food', 'health' and 'care' adequacies, respectively, with stunting outcomes in order to, for example, establish exactly where and when food insecurity or certain disease factors (including hygiene) appear to greatly influence stunting outcomes. However, often such efforts to determine the relative importance of 'food', 'health' and 'care' inadequacies will show rather limited differences when applied to large, nation-wide data sets[5] suggesting that all three are important to a similar degree across the different groups of children in various settings in a country. This is, indeed, an inherent limitation of using data sampled across very large and varied social, economic, cultural and political settings.

Different from 'food', 'health' and 'care', i.e. causal factors at the level of 'underlying causes', correlational analysis of nutrition causality in many countries usually result in clear associations with factors at the level of 'basic causes' like poverty and women's education (as a proxy for gender equality). This is also explained by the conceptual framework as all causal pathways ultimately end up at the level of basic causes which consequently warrant careful analysis. This applies also for the case of Ethiopia (see Section 5, Summary of findings and recommendations).

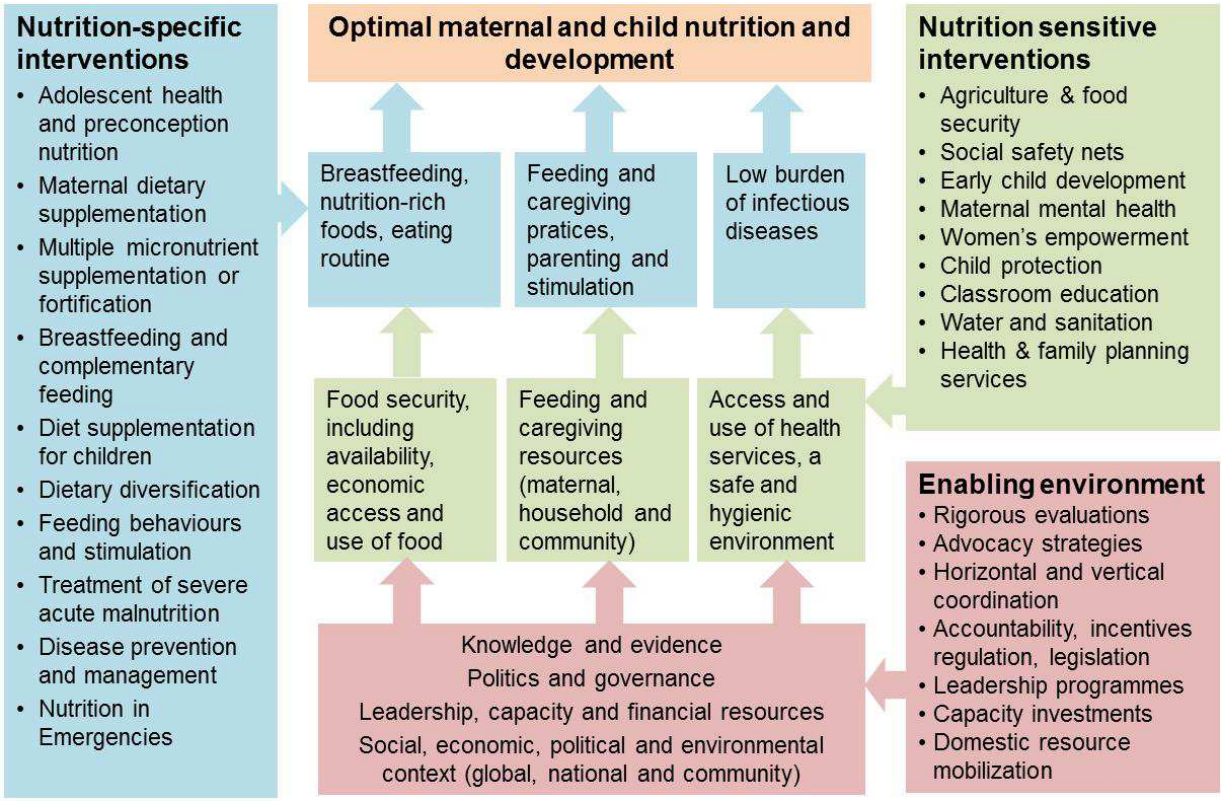
Yet another advantage of the conceptual framework above is that it can help to bring clarity to the recently introduced concepts of *nutrition specific interventions* and *nutrition sensitive programs and*

[4] Bhutta ZA, Das JK, Rizvi A, et al. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet* 2013; 382: 452-77.

[5] Newman J. How Stunting is Related to Having Adequate Food, Environmental Health and Care: Evidence from India, Bangladesh, and Peru. World Bank 2013.

developments which have often led to confusing interpretations. The present report has adopted the position presented in the Lancet series[6] where the former, i.e. *nutrition specific interventions* should mean actions directed to the causal factors at the level of 'immediate causes', while *nutrition sensitive programs* would be the label for actions directed towards the level of 'underlying causes'.

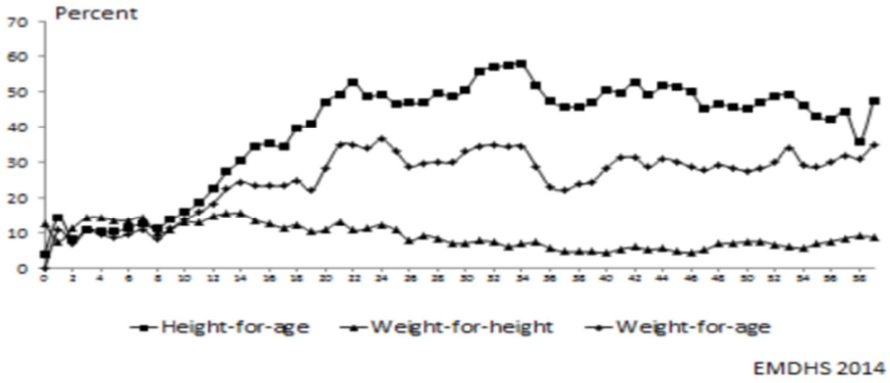
Figure: Nutrition actions as related to nutrition causality framework



Another important limitation or challenge in the context of causality analysis of stunting developments is the nature of the 'stunting process' itself. We have now accepted that 'stunting', i.e. low length or height for age is a gradual outcome of processes that affect the child during the '1000 days' starting from conception, through pregnancy and birth, to the time the child reaches the second birthday. The officially defined level of stunting is then taken as the average/mean value of stunting in sampled children between 0 to 60 months of age, excluding the first 280 days (fetal phase) and adding more than a 1000 days (2 – 5 years) beyond the agreed end-point of the '1000 days'. During this 0-60 months' age span the level/prevalence of length/height restrictions varies greatly as the below figure taken from the 2014 Ethiopia mini-DHS clearly demonstrates.

[6] Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; 382: 427-51.

Figure 7.1 Nutritional Status of Children by Age



What this average number, i.e. the 'official stunting level' means in terms of health risks (immediate and future), cognitive developments and other negative treats related to stunting[7] is really open to debate.

Returning to the topic of stunting causality analysis; the implications of the drawn-out, 1000 days' stunting process and the likewise drawn-out period, 0-60 months, for measuring length/height restriction in individual, sampled children, is that obviously the pattern of causal factors that will affect the children's physical, mental and physiological developments during these development stages are likely to vary greatly! Therefore, substituting this drawn-out, very multi-dimensional, complicated and complex process of stunting with a single measurement of length/height restrictions at the time of the survey and then correlate this number to a series of potential causal factors obviously poses very serious limitations to both the analysis and the interpretation of the results.

Given all these challenges and pitfalls in conducting a nutrition causal analysis based on statistical correlations within existing data sets (primarily DHS), the SITAN exercise was extremely fortunate to have the participation of the **Tulane University Group.** This is arguably the most recognized 'center of excellence' for nutrition information systems and analysis, including the long-standing work on nutrition surveillance and compilations of (UN-SCN) global nutrition reports by the Team Leader, Professor John Mason.

In what is henceforth frequently referred to as the **Tulane Complementary Analytical Report,** the results of a careful and very rigorous statistical analysis of available, nutrition-related data sets are presented. The **Tulane Complementary Analytical Report**[8] hence, does not repeat the multiple regression analysis work already published (see Literature Review) but selects individual, nutrition-related sets of variables and prudently explores any possible associations taking potential, 'confounding' factors into account.

[7] Black RE, Victoria CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; 382: 427-51.

[8] Mason JB, Potts KS, Crum J, Hofer R and Saldanha L. A Situation Analysis of the Nutrition Sector in Ethiopia. A report to UNICEF and EU. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2015.

On several occasions, the **Tulane Complementary Analytical Report** applies separation of age bands recognizing (ref. above discussion) the importance of the developmental stages of the child during the '1000 days' period. One very compelling outcome of this analytical approach is the analysis of the IYCF variables presented in of the **Tulane Complementary Analytical Report, p.54 ff.** and summarized in Section 5 below.

The **Tulane Complementary Analytical Report** also includes a critical analysis of the quality of existing data sets, especially the Demographic and Health Surveys, DHS. Great caution is advised when recognizing various types of measurement errors, including 'age heaping' and measurement of children lying down (length) when they should have been measured standing up (height) and *vice versa*. As a result, the **Tulane Complementary Analytical Report** advises that the 2014 'mini DHS' results should be regarded with caution until confirmed by the soon-to-come 2016 full-scale DHS.

Because of the apparent limitations of the 2014 Ethiopian mini-DHS, the **Tulane Complementary Analytical Report** resorts to use the 2011 DHS data set for most of their correlational analysis. This is understandable but has the negative implication that the data were collected more than 4 years ago and - as far as it applies to children 3-5 years of age in that data set – the causes of stunting may originate several further years back! This would maybe not be a major issue in situations and countries with limited changes but is likely to be more critical in the rapid flux of change that has happened in Ethiopia during the last decade.

As further explained, the 2011 and (for trend analysis) the 2000 DHS data sets have been given priority in the analytical work carried out by **Tulane**, because the sample size is larger - around double that of the mini DHS's in carried out in 2005 and 2014 – and with less problematic age heaping and measurement errors. This allows for more precision in the correlational analysis but, as is frequently noted in the **Tulane Complementary Analytical Report**, even in these data sets the possibilities for pursuing the analysis to sampled subgroups often becomes limited ("running out of sample…"). Hence, it has to be recognized that lack of statistically significant correlations does not necessarily mean that such associations do not exist; it simply means that the available data sets are not sufficient to support certain conclusions.

3. Literature Review

The social and economic situation in the Federal Democratic Republic of Ethiopia, FDRE, is in the process of dramatic change. In macro-economic terms, the GDP per capita has increased more than 8.3% annually during the last 10 years and poverty headcount is down from 44% to 30%[9]. Concurrent with the impressive economic gains a series of social indicators have showed equally impressive performance; for example child mortality rate is down to xx per 1000 live births, primary school net enrolment up from 31.2% to 91.6%.

[9] World Bank Group. Ethiopia Poverty Assessment 2014. Washington D.C., World Bank: 2015. https://openknowledge.worldbank.org/handle/10986/21323.

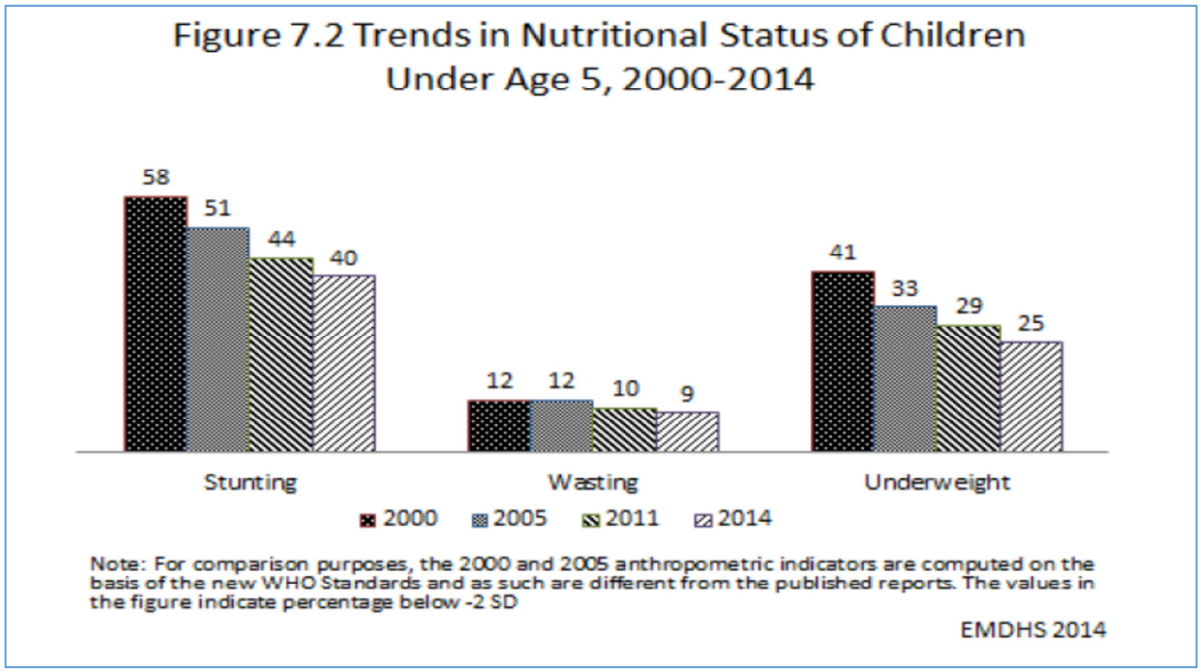
Figure 1.1: Indicators of Progress 2000-2011 (copied from World Bank 2015)

TABLE 1: Ethiopia then and now: a decade of progress from 2000 to 2011

	2000	2011
Percentage of the population:		
Living below the national poverty line	44	30
Living on less than US$1.25 PPP a day	56	31
Without education	70	50
With electricity	12	23
Piped water	17	34
Percentage of children under 5 years that are stunted	58	44
Percentage of rural women receiving an antenatal checkup	22	37
Life expectancy (years)	52	63
Total fertility rate	6	4

Sources: Ethiopia Demographic and Health Surveys, Household Income and Consumption Expenditure Surveys, World Development Indicators, Carranza and Gallegos (2011), Canning et al. 2014.

In terms of nutrition developments during the last decade, there has also been clear and steady improvements but it is noted with some concern that the levels of chronic undernutrition, 'stunting'[10] as well as acute undernutrition, 'wasting', in children below 5 years of age remain comparatively high with corresponding elevated mortality and morbidity risks as well as risk of suboptimal cognitive and physical performance[11].



[10] Stunting=low height for age; wasting=low weight for height

[11] Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; 382: 427-51.

So what are the causes of malnutrition in Ethiopia and what are the main drivers of change? There is now a substantial body of literature and research addressing the questions around nutrition determinants in Ethiopia, and the present SITAN study has made an effort to collect and make available as many as possible of these sources of information[12]. In these efforts we have focused on research and studies conducted during 2000-2015 being well aware of significant earlier works carried out by the Ethiopian Nutrition Institute, ENI, the Ethiopia Health and Nutrition Research Institute, EHNRI, and studies conducted by external researchers and institutions.

It appears that the first attempt to put together a comprehensive overview of the nutrition situation in Ethiopia was done 2005 by a team supported by UNICEF for GoE and coordinated by T. Benson from IFPRI[13]. He led a team of Ethiopian researchers to systematically review available information on nutrition indicators in relation to expected causal patterns according to the UNICEF conceptual framework of causality[14]. The study rather consistently related the problems of malnutrition in Ethiopia to the pervasive levels of poverty that prevailed at national, community and household levels at that time and which in turn led to poor household food security and lack of critical basic services (health, education, WASH) and which also put excessive pressure (work-burden) on the child caretakers, i.e. the mothers and the women in general. These factors together resulted in poor intake of nutrients and high level of infectious diseases across all areas and population groups in Ethiopia albeit with significant differences in terms of dietary/feeding practices and disease patterns. This study later served as the basic reference for the formulation of the first National Nutrition Policy, Strategy and Program in 2008.

The baseline survey for the (first) National Nutrition Program, 2011/13[15]-2015, carried out by EHNRI in 2009/2010, provided further evidence that the situation in the country in terms of levels of malnutrition still remained concerning and that most of the indicators related to causal factors remained in line with the observations in the 2005 IFPRI report. However, a number of early positive changes were also noted, including increased coverage of some nutrition interventions (Vitamin A Capsule distribution, de-worming and CMAM/TSF[16]), implemented through an 'Enhanced Outreach Strategy, EOS', starting from 2004-2005. The EOS remained a major vehicle for these nutrition interventions for many years and was successfully combined with a 'Targeted Supplementary Feeding, TSF', program supported by World Food Program providing nutrition supplements to Pregnant and Lactating Women, PLW, and children under 5 years of age with moderate acute malnutrition, MAM. The EOS as a modality for selected nutrition interventions was subsequently adapted in different ways and the interventions are presently being adopted as *routine* services within the expanded Health Extension Program, HEP, (See Section 4.2.1). The Targeted Supplementary Feeding, TSF, program has also been maintained up to present time through various scaled-down modifications and is likely to eventually be fully integrated into the updated Productive Safety Nets Program, PSNP.

[12] The full list of available studies and reports as well as relevant data sets is available from UNICEF, Ethiopia, and from Tulane University

[13] Benson T, ed. An assessment of the causes of malnutrition in Ethiopia. IFPRI, Washington DC: 2005

[14] UNICEF. Strategy for Improved Nutrition of Children and Women in Developing Countries. UNICEF, New York: 1990.

[15] The NNP formulation and approval was delayed

[16] CMAM/TSF=community management of acute malnutrition combined with 'targeted supplementary feeding' a joint effort by UNICEF and WFP reaching millions of children and PLW

The most comprehensive recent update of the nutrition situation in Ethiopia was issued by the World Bank in 2012[17]. Following the same conceptual approach as the 2005 IFPRI report, the World Bank team recognized the many improvements and developments taking place in terms of poverty reduction, social services (especially the Health Extension Program (see 4.2.1) and improved conditions for women. They took note of the continued high vulnerability to droughts and other shocks in many parts of the country but recognized the effectiveness of DRM efforts (especially the PSNP and HABP, see4.3.1) to mitigate some of the impact of such shocks.

The World Bank 2012 report also took note of the fact that a series of nutrition specific interventions had reached significant coverage and were likely to be contributing to the slow but steady improvements in nutrition status that by then was becoming evident. These interventions included the above mentioned EOS/TSF/CMAM but also the World Bank/UNICEF supported 'Community Based Nutrition, CBN, pilot program. The continued efforts to improve Disaster Risk Management and Food Security (see 4.3.1) were also noted by the report.

Another important development between the IFPRI 2005 and the World Bank 2012 reports was the added focus on *chronic undernutrition, i.e. stunting*. For decades, 'malnutrition' in Ethiopia was equated with *acute malnutrition* and – for all practical purposes – did not exist unless levels of 'global acute malnutrition', GAM[18], exceeded 15%. However, with increasing global attention to the 'forgotten' plight of chronic undernutrition, stunting, and the publication of the 2009 *Lancet series*[19], the GoE and partners recognized that stunting would, indeed, require full attention in order to safeguard the full potential of the Ethiopian population and the prosperity of the country. The important first steps towards adopting a comprehensive 'stunting prevention strategy' as part of the National Nutrition Program was done through commissioning of a consultancy report[20] with subsequent deliberations and recommendations by a national Stunting prevention Workshop in 2010[21]. The early engagement of Ethiopia as an 'early riser' in the SUN global movement and participation in the REACH initiative (2011) were further evidence of the switch of focus of nutrition work in Ethiopia – away from a single focus on emergency nutrition and 'acute malnutrition' (low weight for height) towards adopting a 'nutrition-in-development' approach with stronger (joint) emphasis on chronic undernutrition, stunting.
The links between continued high levels of malnutrition in general and stunting in particular in Ethiopia, and the impact at individual level and on national development were later elaborated by the PROFILES[22] and the 'Cost of Hunger' initiative[23].

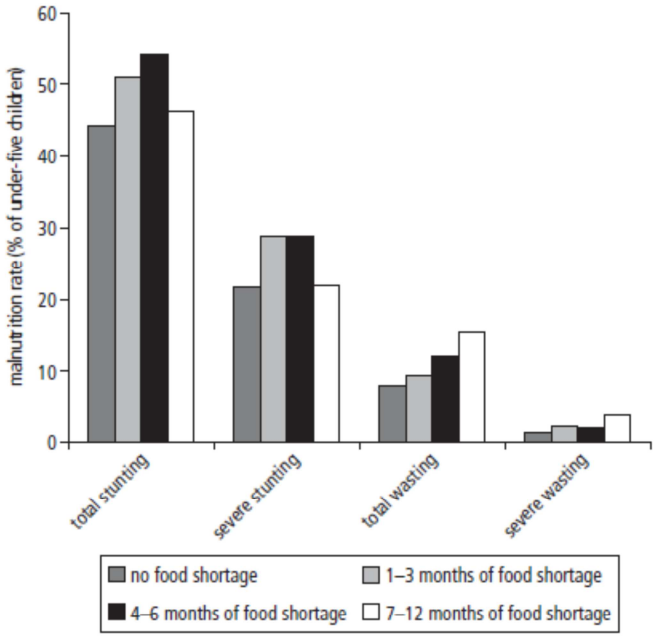
The World Bank 2012 report came to the same basic conclusion as the 2005 IFPRI report, namely that malnutrition in Ethiopia is primarily driven by poverty and poor access to essential basic services. There was not much added information regarding causal factors and pathways except taking note of the

[17] Rajkumar AS, Gaukler C and Tilahun J. Combating Malnutrition in Ethiopia: An Evidence-based Approach for Sustained Results. Washington, D.C., World Bank: 2012.
[18] Global Acute Malnutrition, GAM, = weight for height below 2 S.D. in children under 5 years of age
[19] Victora CG, Adair L, Fall C, et al. Maternal and child undernutrition: consequences for adult health and human capital. *Lancet* 2008; 371: 340-57.
[20] Shrimpton R. Stunting in Ethiopia: likely causes, probable consequences and how to accelerate reduction. 2011
[21] FMOH. National Consultative Workshop on Accelerated Stunting Reduction. 2011
[22] Hailu I, Kidanu A, Kovach, T, et al. A Tool to Support Nutrition Advocacy in Ethiopia: Ethiopia PROFILES 2012 Estimates. Washington, D.C., and Addis Ababa, Ethiopia: Food and Nutrition Technical Assistance III Project (FANTA)/FHI 360 and Federal Democratic Ministry of Health, Ethiopia: 2013.
[23] UNECA, WFP. The Cost of Hunger in Ethiopia. Implications for the Growth and Transformation of Ethiopia. Social and Economic Impacts of Child Undernutrition in Ethiopia. Addis Ababa, Ethiopia: 2013.

persistent higher levels of malnutrition in rural populations compared to urban areas which is consistent with the Word Bank poverty report of 2014.

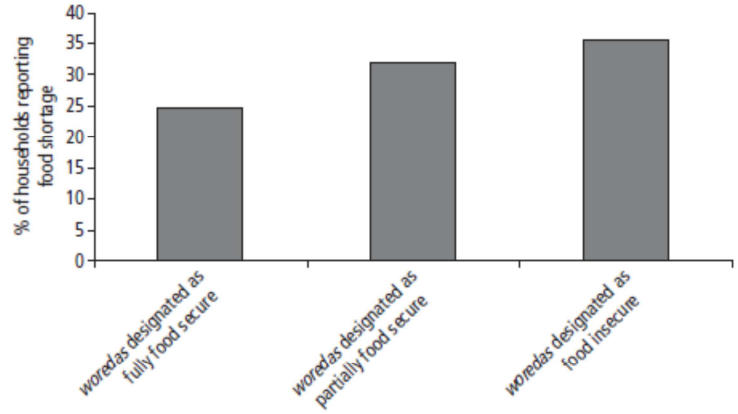
In addition, the WB 2012 report made a strong argument for policy-makers and planners to recognize the difference between food security and nutrition security where the former, i.e. food security, contributes to nutrition security but, by itself, is not a sufficient condition. There is, indeed, an important difference between stunting and wasting where household food insecurity appears to be related to wasting but not to stunting (see figure 1 below copied from the WB 2012 report). As an extension of this argument the report presents convincing data to demonstrate that malnutrition is not only a problem in 'food insecure' areas but also in areas reported to be more food secure (see figure 5 copied from the WB report).

Figure 1 Malnutrition Rates in Under-Five Children from Households with Varying Degrees of Self-Reported Food Insecurity, 2004



Source: Authors' calculations using data from the 2004 Welfare Monitoring Survey.
Note: Total wasting refers to moderate as well as severe wasting, and total stunting refers to moderate as well as severe stunting.

Figure 5 Percentage of Households Reporting Food Shortage within Previous 12 Months in *Woredas*, by Food Security Designation



Source: Authors' calculations using data from the 2004 Welfare Monitoring Survey and food aid data from the Disaster Risk Management and Food Security Sector.

The WB 2012 report ends up putting strong recommendations for actions in a number of areas, including:

- Improved coverage of a set of *nutrition specific interventions*, i.e. Vitamin A capsules, de-worming, IYCF with special emphasis on breastfeeding, and salt iodization.
- Scaling up of the CBN/GMP pilot program
- Improvement of multisectoral coordination and collaboration
- Improvement of nutrition information systems

Another recent effort to update the patterns and causal pathways of malnutrition in Ethiopia is being carried out by GroundWorks LLC and the first step in the process includes a systematic review of existing global evidence of causal factors with potential impact on stunting outcomes[24]. This report uses the UNICEF conceptual framework for causality analysis but in a version proposed by R.Shrimpton that allows for a separation of the factors that influence stunting related to the mother as separate from those directly affecting the newborn and young child. The study is intended to establish a set of critical indicators that would lend themselves to correlational analysis in order to establish important associations between causal factors and stunting outcomes in Ethiopia but this last part of the work is still not completed.

There are, however, two other examples of published work reporting results from correlational analysis between a set of causality-related indicators and stunting outcomes using the Ethiopia DHS data sets from 2000, 2005 and 2011. These are the 'new' IFPRI[25] study and the study carried out by Tufts and Jimma Universities[26] for the ENGINE program.

[24] Wirth J, Rohner F, Petry N, et al. Understanding Stunting Reduction in Ethiopia 2000-2011. Literature Review and Indicator Inventory. Addis Ababa, Ethiopia: 2013.

[25] Headey D. An analysis of trends and determinants of child undernutrition in Ethiopia, 2000-2011. ESSP II Working Paper 70. Washington, D.C. and Addis Ababa, Ethiopia: International Food Policy Research Institute (IFPRI) and Ethiopian Development Research Institute (EDRI): 2014.
http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128896.

[26] Ghosh S, Suri D, Hiko D, et al. Factors Associated with Stunting in Ethiopian Children Under Five. Addis Ababa, Ethiopia and Medford, USA. ENGINE, Tufts University and Jimma University: 2014.

These two studies use similar analytical approach with multiple regression analysis of the DHS 2011 data set and arrive at similar results albeit with some minor differences. The IFPRI study singles out household assets, maternal and paternal education, and antenatal care and birth intervals as the 'most consistent predictors of undernutrition outcomes' with other factors having importance in either rural or urban areas but not both (piped water, toilet facilities)', but also adds that these factors can only explain a small proportion of observed nutrition improvements 2000-2011.

The Tufts/Jimma Universities' study (comparing linear regression analysis results from 2000, 2005 and 2011 DHS) concludes that the most common predictors of childhood stunting are male gender, low wealth index, low birth weight, low maternal education (in older children), low maternal height and BMI, and presence of diarrhea in the previous two weeks.

The Tulane Complementary Analytical Report subjects these data sets and purported associations to critical further scrutiny and arrives at a much more restricted sets of significant predicting factors (See Tulane Complementary Analytical Report and section 5). This, in the view of the author, reflects the cautions explained in Section 2 regarding likelihood of being able to explain causes of stunting considering the complexity (non-predictability) of factors causing stunting in individual children and the use of averages across the drawn-out stunting process and across the widely different conditions of women and children in Ethiopia. It is important to be aware of the broad factors and relationships but for better focus of actions to reduce stunting, a stronger local capacity to assess, analyze and take action (Triple-A) will be crucial as proposed in Section 4.4.5.

4. Gap and Opportunity Analysis of Policy and Program Options

This section includes the results and recommendations from a Gap and Opportunity analysis of the key policy and program areas related to nutrition developments in Ethiopia. The analysis is guided by a set of *research questions* defined in the Terms of Reference for the SITAN work:

1. Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. HEALTH, AGRICULTURE, SOCIAL PROTECTION/PSNP, WASH and EDUCATION
2. Analysis of how far current and planned nutrition interventions link humanitarian with longer-term interventions
3. Identification of sectoral policies and development programs targeted towards pastoralists, and their progress to date
4. Analysis of how sectoral policies are complementary and align with intended outcomes of nutrition interventions
5. Identification of gaps in program monitoring and oversight with recommendations for corrective action

Of these research questions, the first one clearly relates to the issue of how far key government sectors in Ethiopia have managed to integrate their respective nutrition roles and responsibilities into their policy and programming frameworks, i.e. adopting *nutrition sensitive* approach (the health sector is responsible for most or all of the *nutrition specific interventions* but also needs a *nutrition sensitive* approach in its general strategies and operations related to health developments*)*. In exploring the gaps and opportunities from this perspective, the SITAN team adopted a two-step methodology:

Firstly, a review is made of the relevant NNP Strategic Objectives to establish to what extent the sector-specific roles and responsibilities have already been defined in terms of *NNP Initiatives and activities* followed by an assessment of current implementation status of these *initiatives and activities.*

Secondly, a more broad-based analysis is made into existing key policies and programs within these sectors exploring if and how they are already reflecting nutrition considerations and outcomes.

The analysis thereafter proceeds to address the remaining research questions 2-5 above as 'cross-cutting issues'.

Finally, a series of common themes and recommendations are suggested as emerging from across the different parts of the policy and program gap and opportunity analysis.

Hence, the analysis is divided into four parts:

4.1 Analysis of key initiative/intervention areas of the National Nutrition Program 2013-2015;

4.2 Analysis of specific policy and program issues in key government sectors

4.3 Critical cross-cutting issues

4.4 Common themes and summary recommendations

Methodology

The Gap and Opportunity analysis was conducted as open-ended desk reviews combined with Key Informant interviews and – when possible – corroborated during field visit discussions at *woreda* and *kebele* levels.

The SITAN team, given the limited time for undertaking the exercise, is well aware of the limitations in addressing a very wide range of policy and program issues across the very different locations and situations prevailing in Ethiopia. We may stand to be corrected on a number of specific observations but it is our genuine hope and aspiration that these broad 'snapshots' will help to identify key issues and developments, i.e. true gaps and opportunities, in planning for accelerated improvements of nutrition in Ethiopia.

4 .1: Analysis of key initiative/intervention areas of the National Nutrition Program 2013-2015

In order to establish an overview of ongoing initiatives and actions in the NNP, a series of tables were constructed based on the NNP Strategic Objectives. These tables are included as Appendix 2.

4.1.1: Summary of observations on Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years).

The desk review of NNP SO1 (Appendix 2) reveals a rather low rate of implementation across all planned initiatives and activities.

For women 15-49 years the only activities with significant implementation coverage are clearly those directly related to pregnancy but even the high priority, national scale Iron/Folic Acid supplementation is only reaching an estimated 34% of the pregnant women and even fewer - less than 1% - are estimated to have taken the minimum dose for effective prevention of pregnancy anemia. There is presently a strong effort by the GoE to improve ANC and institutional deliveries and this will offer improved opportunities to reach pregnant and lactating women, PLW, as well as women of childbearing age with nutrition services (see section 4.2.1)

For adolescent girls the picture is equally disappointing at present with only limited pilot initiatives being implemented. Most of these initiatives are 'school-based' as it has proved to be difficult to reach out-of-school adolescents. Stronger participation of the education sector in the next phase of the NNP (See section 4.2.5) will provide good opportunities for acceleration of planned nutrition activities in support of adolescent girls and there are also new opportunities for involving out-of-school adolescents (both boys and girls) through non-formal and informal education initiatives.

4.1.2: Summary of observations on NNP Strategic Objective 2: Improve the nutritional status of infants, young children and children under 5.

Appendix 3 clearly shows that NNP Strategic Objective 2 is the area where most of the ongoing NNP initiatives and activities are taking place at present. These activities include what is normally referred to as *nutrition specific interventions* (see Section 3) and implemented primarily by the health sector. The challenges and opportunities identified in the table are predominantly operational, i.e. referring to the

effectiveness (coverage, quality) in delivery of the service, and – to some degree – to 'demand side' issues, i.e. public understanding of the purpose and importance of the service as compared to the opportunity costs of participating/spending time to access the service.

Many of the operational issues are related to the fact that the health services system/Health Extension Program in Ethiopia is undergoing a rapid upgrade and expansion and the 'delivery modality' for many of these interventions are transitioning from 'campaign', via 'outreach' and 'child health days' towards a '*routine*' based systems. This being the case, the different service providers (health center staff, health extension workers and women development army) have not yet fully organized themselves and divided responsibilities and supervisory roles. These issues are discussed further in Section 4.2.1.

4.1.3: Summary of observations on NNP Strategic Objective 3: Improve the delivery of nutrition services for communicable and non-communicable/lifestyle related diseases.

These initiatives and actions were not assessed in detail but generally discussed in the section addressing nutrition mainstreaming and coordination within the Health Sector (See section 4.2.1)

4.1.4: Summary of observations on NNP Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors.

This is the NNP Strategic Objective where a long 'menu' of suitable initiatives and actions are listed and proposed for implementation but where – as the table shows – so far only limited and scattered implementation has taken place, often in a rather limited scale covering only a few *kebele* and households.

Most of the proposed *nutrition sensitive programs* are listed and articulated within the agriculture sector where implementation initially appeared to be very slow but where more recently a wide range of initiatives are starting up. The increased attention to nutrition outcomes of agriculture sector programs is clearly reflected in activities on the ground. The ENGINE program deserves special mention as an example of an effort to establish 'agriculture-driven' nutrition improvements but there are plenty of other programs, projects and minor initiatives in the same direction.

Among the early experiences from operationalization of *nutrition sensitive agriculture development* in Ethiopia is the need for formative and operational research as it is clear that most of these activities are highly context-specific. Another important aspect noted is that involvement of agriculture extension staff in addressing problems of malnutrition has been ongoing for some time in 'food insecure' areas of the county but that there seems to be very limited understanding of nutrition issues in 'agriculture production' areas although levels of malnutrition (stunting) are almost the same!

The agriculture sector, hence, needs to continue to build understanding and to re-orient itself at all levels to effectively recognize their critical role in establishing sustainable household food security as a necessary condition for nutrition security. These issues are further elaborated from an agriculture policy and program perspective in Sections 4.2.2.

Compared to agriculture, the other key sectors for *nutrition sensitive programs* are considerably less elaborated in the NNP as clear from Appendix 2. Again, the gaps and opportunities for enhancing *nutrition sensitive actions* in these sectors are further discussed in Section 4.2, subsections 2-5.

4.1.5; Summary of observations on NNP Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation.

The issues of 'capacity for nutrition monitoring' (NNP Result 5.3) and multisectoral coordination (NNP Result 5.5) will be discussed more in detail in Section 4.3.3-4. The other aspects of SO 5 were not assessed in detail by the SITAN exercise. We did, however, note the rapid and effective organization of 'Women's Development Army'[27] in many of the communities visited and we believe this strategy will greatly enhance the participation and leadership of women in the efforts to eliminate malnutrition in Ethiopia.

4.2: Analysis of key sector policy and program issues.

4.2.1: Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. HEALTH

The Health Sector has taken the lead in moving nutrition policy and program initiatives and action forward in Ethiopia during the last decade. Initially starting with 'emergency' health and nutrition actions (campaigns, TFC and supplementary feeding) the implementation of nutrition services and actions then moved to an 'enhanced outreach strategy', EOS (CMAM, Vitamin A, de-worming plus nutrition/health education) and from there on towards a gradual integration of nutrition actions into the emerging, comprehensive Health Extension Program, HEP. In the process, special modalities were adopted like 'child health days' and 'women support groups' while steadily moving towards full integration of nutrition actions into *'routine'* health services delivery systems. This nutrition 'mainstreaming' process is still ongoing and the pace of the process needs to be adapted to the expansion and strengthening of the *capacity* of the HEP.

Whereas initially, the Health Extension Program, HEP, was considered identical with the impressive start-up of the Health Extension Workers, HEW, program, the comprehensive HEP is now comprising the important additions of a fully developed and professionally staffed network of Health Centers PLUS the new cadres of 'Women Development Army' (often referred to as Health Development Army as their focus is predominantly health) volunteers organized through networks of 5 and 30 household clusters. With these additions, the HEP is now reaching a significantly higher level of capacity both in terms of coverage/intensity of community interactions as well as professionalisms and technical capacity for addressing more demanding and complicated preventive actions, services and treatments. Again, it is important to recognize that this is very much 'work in progress' where competing priorities and capacity

[27] Lemma F and Matje J. Delivery Platforms for Sustained Nutrition in Ethiopia. Lancet 2013; 382: 488.

gaps in terms of skills and quality of services need to be addressed and where the process will be slower in areas with lower existing human, economic and institutional capacities (notably the 'Development Regional States, DRS).

The establishment of a network of well-equipped and staffed Health Centers together with the build-up of the Women Development Army have put Ethiopia in a position to strongly promote institutional deliveries which is presently taking place as a major government priority. This has been recognized as a prerequisite condition for effectively addressing the longstanding problem of high maternal mortality rates in Ethiopia. This present focus on institutional deliveries is sometimes seen as competing with other primary health care priorities, including nutrition, but this should not be the case. Instead, stronger ante-natal, peri-natal and post-natal services offer a great opportunity to improve maternal and newborn nutrition services and actions which have so far been largely lacking or sub-optimal. However, the issue of developing a clear and detailed 'protocol' for integrating maternal nutrition services into the emerging, improved maternal health services does not at present seem to get sufficient attention!

What is also concerning from a broader perspective of critical health-based nutrition services and actions is the fact that recent health sector strategic policy documents hardly mention nutrition[28] and do not elaborate on how such critical health-based nutrition services and actions should be organized, supported and supervised. Again, we call on GoE and partners to ensure that all the critical health-based nutrition services and actions are maintained as high priority in the further improvements and expansions of the health services in Ethiopia.

At the operational level, such health-based nutrition services and actions will also need to be coordinated with 'nutrition sensitive actions' in other sectors such as agriculture, education, WASH and others.

Therefore, what is now required is to ensure that nutrition actions within the 'enhanced' HEP are well-planned and that specific roles and responsibilities of the different health administrative levels and workers are clearly defined. It is proposed that in order to systematically move towards uniformity and clarity of actions, the option of establishing a National (Community Based Nutrition Protocol, NCBNP[29] is considered. Again, it is emphasized that the pace of the transition towards the NCBNP be adapted to the capacities (HC, HEW, WDA) of the Health Extension Program as they are scaled-up and consolidated.

For more detailed information on health-based nutrition initiatives and actions, please see Appendix 2.

The Tulane Complementary Analytical Report[30] provides a series of important observations regarding further development and actions related to nutrition in the context of the health sector:

- On the issue of *access to health services* in general, (pp 303-306) the report finds a strong correlation between delivery in facility (proxy for access to health services) and growth among children 0 to 24 months but that this only applies to better off households. In children 24-60

[28] Draft FMOH, FDRE. Health Sector Transformation Plan (HSTP) 2015/16-2019/20 (2008-2012 EFY), Draft. Addis Ababa, Ethiopia: Federal Ministry of Health, Federal Democratic Republic of Ethiopia: 2015

[29] Rwanda. DRC and Chad are among the countries adopting this approach

[30] Mason JB, Potts KS, Crum J, Hofer R and Saldanha L. A Situation Analysis of the Nutrition Sector in Ethiopia. A report to UNICEF and EU. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2015.

months, instead using ownership of Growth Chart and Measles vaccination as proxy for access to health services, no significant correlations could be established.

- On the issue of *maternal nutrition* (pp. 37-38) it is noted that overall levels of maternal undernutrition measured as BMI<18.5 cm in non-pregnant women, there was a slight improvement in 2011 compared to 2000, 30% and 26%, respectively. However, large areas in North-eastern Ethiopia have levels exceeding 40% of low BMI indicating a situation of 'considerable need'. Anemia levels are also improving but remain a concern, especially in low-land areas.
- Considerable emphasis is put on assessing *intensity of community health worker interaction with households* based on an earlier paper[31] suggesting that this is, indeed, a key variable in determining success of programs addressing child undernutrition. They suggest that the establishment of the WDA (Women Development Army) offers a great opportunity to reach a critical level of *intensity* provided the nutrition-related tasks (including GMP) are effectively shared between the HEW and the WDA cadres. Unfortunately, the detailed analysis of health services *workforce* does not include the extensive new cadres of health center staff who, as pointed out above, should also be part of an updated community based nutrition approach.

On the issue of *IYCF,* here the **Tulane Complementary Analytical Report** provides some very useful observations for better focus in IYCF promotion, education activities (p.58). There are presently a rather large number of initiatives in this area which could benefit from using the **Tulane Complementary Analytical Report** observations in a joint review of existing practices and tools for the purpose of reaching agreement of a common approach for future use within not only health but also agriculture, education, WASH and public (and private) communication work.

Findings and Recommendations Summary Table: Nutrition in Health Services

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
Basic health services should be accessible free of charge for all Ethiopians	Ongoing expansion of basic health services systems to be kept on pace with added focus on DRS	Implementation modality for health-based nutrition interventions to be based on capacities as they develop
HEP major avenue to achieve above objective. HEP workers now include HC staff, HEW and HDA	The HC/HP/HDA structures increasingly put in place with DRS lagging behind. Overall the system requires further improvements in terms of management functions	Nutrition responsibilities of HC/HP/HDA to be clearly defined, delineated and formalized
HEP 'nutrition module' defined as a package of selected interventions rather than reflecting comprehensive nutrition promotion approach. Implementation of module not	Develop and reach agreement on updated 'nutrition module' of HEP, "CBN", combining all relevant aspects of prevention and control of 'wasting', 'stunting' and over-nutrition.	Establish "CBN" module as National CBN Protocol (in Health) to ascertain uniform implementation but recognizing need for modality adaptation according to implementation

[31] J.Mason (for WHO)

uniform among partners.		capacity (see above)
Health sector strategic plan for next 5-year planning cycle does not reflect nutrition priorities	Great opportunity to further enhance nutrition actions within the evolving, improved HEP	To be addressed urgently
Present priority on 'institutional deliveries' seems to miss the opportunity to concomitantly improve actions to reduce maternal nutrition problems		To be address urgently (see below)
Special Issues:		
HEP workers have insufficient time to implement nutrition actions effectively	Consider adding one HEW in *kebeles* with enlarged work burden.	Define HW, HEW, HDA respective roles and responsibilities and make sure they are able to organize their nutrition work effectively. Tools and guidelines will help achieving uniform procedures
HEP workers lack refresher training	More frequent ITP. Establish system of 'knowledge sharing' among HEP workers	Update nutrition part of ITP based on emerging 'good practices'
HEP workers lacks SBCC skills and materials (in local languages)	ITP to include communication and counselling skills	Update and promote SBCC IEC materials, incl. CHC. Translate to local languages
CBN technical 'package' of interventions need review and update and subsequent operational clarifications in terms of roles and responsibilities within HEP	CBN currently 'ambiguous' concept that needs clarification and harmonization within HEP.	Develop an explicit 'national CBN protocol' that will lead to harmonization across partners and geographical areas implementing health-based CBN
Health-based nutrition interventions:		
Growth monitoring and promotion, GMP.	GMP is presently the single nutrition intervention in Ethiopia with strongest impact on stunting reduction[32]. Hence, all efforts to be done to scale-up and improve quality[33]	Presently, improved *participation* is most important to fully exploit GMP impact on stunting reduction. Requires optimal organization of HEW and WDA work
OTP/CMAM	OTP successfully taken to scale through HEP but not fully mainstreamed	Better integration of all aspects of OTP into HEP required (responsibilities, supplies, reporting, financing, etc.)
IYCF communication	Large number of approaches	This will require formative and

[32] Mason JB, Potts KS, Crum J, Hofer R and Saldanha L. A Situation Analysis of the Nutrition Sector in Ethiopia. A report to UNICEF and EU. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2015.

[33] Clarification: GMP uses weight/age as it has less measuring errors compared to length/age but since underweight closely follows stunting trends it is considered as a valid proxy during the 6-24 months age interval. The whole purpose is to identify and address early signs of growth faltering in the child.

	and tools used by different partners. Needs to be harmonized and optimized	operational research to find best context-adapted approaches. Tulane Complementary Analytical Report findings to be operationalized. Improved breast-feeding performance should be achieved quickly, diet diversity will take longer time but need to be initiated immediately
Vitamin A Capsule supplementation and de-worming	*Routine* Implementation modalities to be better clarified. Other implementation modalities to be maintained in areas where full HEP capacity for *routine* implementation is not yet established	Vitamin A deficiency control strategy to be reviewed in view of micronutrient survey results. Alternative strategies (fortification, diet diversification) to be supported as operational trials
Maternal nutrition	Up to now largely neglected aspect of stunting reduction strategy. New emphasis on ANC and institutional deliveries offer great opportunity to strengthen this aspect of NNP implementation	Specific 'algorithms' for maternal nutrition actions to be worked out, operationalized within (extended) HEP and monitored and evaluated.
HEP supervisory system HDA – HEW – HW – *woreda* health office needs improvement	Clarify responsibilities and accountabilities at HEP operational level and include in ITP and day-to-day performance assessment systems	Technical supervision of nutrition activities may require designated person at *woreda* office level. S/he could provide technical back-stopping as needed
HEP nutrition management information system needs improvement and better use at *kebele* and *woreda* levels	Finalize design of NNP Monitoring Tool. Include in IRT and day-to-day performance	Organization and use of nutrition information at HP level most critical for improving nutrition management
Essential nutrition supply, ESN, funding and logistics: comparatively good but RUTF needs improvement	CMAM/RUTF funding and logistics needs to be streamlined while retaining 'surge response' capacity in emergencies	Most inaccessible locations often having most critical need for ESN and are most likely to face stock-outs. Attention required.

4.2.2: Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. AGRICULTURE

The agriculture and rural development sector is the other 'line sector' that has been most closely involved in nutrition actions in Ethiopia during the last decade (and earlier). The focus, however, has primarily or almost exclusively been from a food security, disaster risk management point of view in response to the country's vulnerability to drought emergencies. Consequently, the emphasis of nutrition actions in the agriculture sector has tended to be on 'acute undernutrition', i.e. wasting, rather than chronic undernutrition, stunting.

The fact that agriculture is the largest productive sector in the Ethiopian economy has led to a 'dichotomy' between the two – potentially conflicting – priorities of reaching food security versus producing agriculture-based products for the market. In practice, this dichotomy has led to the perception that the country can be divided into *food insecure* and *agriculture producing areas* where the former will focus on actions to alleviate household and community food insecurity (including food safety nets) while in the latter the focus is on optimizing agriculture production. As a consequence, the understanding and knowledge of nutrition matters as well as experience of nutrition work differ significantly among agriculture staff working in each of these two areas. It has also led to the misconception that malnutrition is a problem only in food insecure areas whereas data clearly shows that most agriculture production areas have almost the same levels of undernutrition if measured as stunting.

Our studies recognize in particular the close working relationships between agriculture extension workers/DAs and Health Extension Workers, HEWs, at community, *kebele,* level in food insecure areas and that this collaboration normally is a part of ongoing, long-term work of the local DRM committee which also includes the *kebele* administrator and other local leaders, e.g. women's association. Consequently, there is already a functioning 'multisectoral' coordinating body and process in place and it is important to build upon and further develop this mechanisms – essentially broadening the scope of their work to address stunting in addition to acute malnutrition and food insecurity. It is also important to ensure that such multisectoral work is fully supported from the agriculture departments at *woreda* and higher levels (presently not always the case).

During recent few years, there has been a determined effort by the agriculture sector to adjust their work to include stunting prevention measures in both food insecure and agriculture producing areas exploring opportunities for *nutrition sensitive agriculture actions*. There is currently a very large number and wide range of different initiatives being undertaken by government and different partners. It will be very important, indeed, to ensure that there is clear coordination and 'knowledge-sharing' across all these initiatives. The Ministry of Agriculture and Rural Development has recently set up a 'Nutrition Unit' in the Extension Department and this unit needs immediate and strong support also by donors.

One immediate observation from the many ongoing *nutrition sensitive* initiatives is that the implementation of these will require new skill sets among agriculture extension staff and also makes new support mechanisms needed. Furthermore, it is noted that successful implementation of *nutrition sensitive agriculture* actions need formative and operational research in order to adapt approaches to the

local conditions of nutritionally vulnerable families and groups and to establish critical lessons learnt for expansion and improvements of the approaches[34].

It is also important to recognize that while most *nutrition sensitive agriculture* initiatives have tended to focus on home production of sufficient and increased diversity of foods for household consumption, the fact is that increasingly the households are becoming dependent on the market for securing their food needs in general and for diet diversity in particular. Some recent research[35] has clearly demonstrated the relationships between market access, household diet diversity and complementary feeding (food groups) adequacy. Hence, as we recognize the need to urgently address these problems of dietary diversity, we need to pursue both of the approaches of markets and of homestead food production, respectively, in an integrated manner[36].

For more detailed information on agriculture-based nutrition initiatives and actions, please see (Appendix 2)

Findings and Recommendations Summary Table: Nutrition in Agriculture and Food Security

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
National policies recognize that the Agriculture sector has a very important role to play to ensure nutrition security in Ethiopia	These policies need to be articulated into agriculture-based nutrition sensitive strategies and action plans at all levels	Note: agriculture is not responsible for nutrition security but for household food security, HFS – a necessary condition for nutrition security
Agriculture sector should be responsible for household food security[37] but NOT for overall nutrition outcomes	All relevant agriculture sector policies and programs to adopt HHFS as an outcome and corresponding indicators for M&E and accountability purposes	HHFS operational indicators are already in use in various programs in Ethiopia. Should be more widely adopted and included in MS nutrition MIS (see policy/program brief XX)
There is a recent document on Mainstreaming Nutrition in AGP2[38]. The recommendations of this study are largely in line with what is proposed above	Major recommendations of the 'Mainstreaming' study to be discussed and considered for relevant policy and program actions	The NNP2 development process to use the 'mainstreaming' study plus present findings and proposals in formulating the agriculture component of NNP2
A major constraint for mainstreaming nutrition in agriculture is the apparent	Very important to realize that undernutrition, esp. stunting, is almost as high in APA as in CFI	The reasons for low HHFS in CFI and APA areas may differ and this needs to be understood and

[34] The *ENGINE program deserves special mention for developing and operationalizing these approaches*

[35] Hirvonen K and Hoddinott J. Agricultural production and children's diets: Evidence from rural Ethiopia. ESSP II Working Paper 69. Washington, D.C. and Addis Ababa, Ethiopia: International Food Policy Research Institute (IFPRI) and Ethiopian Development Research Institute (EDRI): 2014.

[36] Coates J and Galante T. Agricultural commercialization, production diversity and dietary diversity among smallholders in Ethiopia: results from a 2012 national integrated agriculture and socio-economic survey. Medford, MA; Friedman School of Nutrition Science and Policy, Tufts University: 2014.

[37] Household food security= sufficient food of adequate quality and safety around the year

[38] "Mayer AB and Baheru DH. Study for Mainstreaming of Nutrition Outcomes in Agricultural Growth Programme (AGP 2) in Ethiopia. Addis Ababa, Ethiopia: European Commission: 2015.

'internal divide' where sector staff (at all levels) related to CFI areas are well aware and keen to engage in nutrition work but those in APAs[39] are not!	areas and that, hence, the agriculture sector has to give equal importance to ensure HHFS in both type of areas	reflected in corresponding agriculture-based activities
The issue of women's work load is probably the single most important factor that creates the paradox of high food production side by side with high levels of undernutrition[40]	This issue needs to be clearly recognized at both policy and operational levels	Popularize the concept of 'Food-Care-Health' as key conditions for nutrition security – they are all necessary but none by itself sufficient!
As noted, agriculture DA[41] (in CFI) are already working closely with HEW and other staff to address HHFS related to nutrition but without support from higher levels (except in DRM)	This, ongoing, 'nutrition sensitive' work needs to be recognized and built upon; with support to critical needs identified at *kebele* level (inputs, technical guidance, links to resource centers)	Guidelines and tools to be developed and provided based on 'good practices' and creative interaction between successful practitioners
Since 'nutrition sensitive' actions are highly context specific, formative research must be essential part of program designs and linked to ongoing M&E	Development, adaptation and roll-out of nutrition sensitive agriculture-based actions requires broad-based, systematic capacity building	Identify existing 'good practices' and scale-up these and learn in the process. Pay particular attention to HH with food insecurity as well as nutrition problems!
Household-based models (self-sufficiency HFS) should increasingly be complemented and replaced (for urban HH) by market-based approaches[42]	Requires increased attention by agriculture/social sciences/public health operational research bodies	HHFS problems in populations and areas with high levels of undernutrition to be focused, including diet/nutrient deficiency assessment among these
Another promising approach is based on local 'nutrition value chain' approaches	Requires local solutions to be based on local production-market-preparation-consumption-feeding patterns	Again: focus on communities and families with high levels of malnutrition
'Milk Matters[43]' offers good potential for pastoralist groups	Requires careful assessment of factors that need to be	As above

[39] CFI=Chronic Food Insecure; APA=Agriculture Potential Areas

[40] FAO:

[41] DA=(agriculture) Development Agents at *kebele* level, i.e. extension staff; normally 3 or 4 per *kebele*

[42] Hirvonen K and Hoddinott J. Agricultural production and children's diets: Evidence from rural Ethiopia. ESSP II Working Paper 69. Washington, D.C. and Addis Ababa, Ethiopia: International Food Policy Research Institute (IFPRI) and Ethiopian Development Research Institute (EDRI): 2014.

[43] Sadler K and Catley A. Milk Matters: the role and value of milk in the diets of Somali pastoralist children in Liben and Shinile, Ethiopia. Medford, MA and Addis Ababa, Ethiopia: Feinstein International Center, Tufts University and Save the Children: 2009.

but can be more widely adapted to agro-pastoralists and livestock keepers (including small animal husbandry)	addressed for successful animal husbandry: fodder, animal health, zoonotic risks, market links, etc.	
The close links between HFS and Social Protection (exemplified by PSNP and "Most Vulnerable HH' approaches to be fully recognized and combined into coherent coordinated programs	As PSNP4 is now being fully 'nutritionalized' sufficient attention and resources to be allocated to formative and operational research to fully optimize nutrition outcomes while also recognizing other relevant experiences (e.g. MVH) inside and outside Ethiopia	(see further section 4 b 2.3)

4.2.3: Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. SOCIAL PROTECTION/PSNP

Social Protection can be listed as the third important sector emerging as a major component of the long-term, NNP multisectoral approach to improvement of nutrition in Ethiopia. A formal GoE policy on Social Protection has recently been adopted by Parliament[44] but much remains in order to fully build up the institutional framework, capacities and mechanisms that will be required for operationalization of the policy. In the meantime, however, it is generally recognized that the Productive Safety Nets Program, PSNP, initiated as a household food security program within the original 'New Coalition for Food Security'[45] has for all practical purposes functioned as a 'social protection type' of programmatic approach. In fact, in this respect it has been and still is one of the largest programs of this type in Africa[46]. Therefore, and for the purpose of the present SITAN exercise, PSNP is included under the heading of Social Protection although the program is managed under the Federal Ministry of Agriculture and Rural Development, Department of Food Security and Disaster Risk Management.

Since its inception in 2003/2004 the PSNP has undergone several transformations, starting out as a rather straightforward food 'safety nets' approach using public works as a means to provide impoverished households in *designated food insecure areas* with food or cash to help them through the 'hungry' seasons of the year. The approach was expected to help these vulnerable households both with continued minimum supply of basic food and to protect them for selling of their productive assets for survival of their families. As a consequence, it was expected that these families would eventually be enabled to 'graduate' away from PSNP support.

[44] MOLSA, FDRE. National Social Protection Policy of Ethiopia. Addis Ababa, Ethiopia: Ministry of Labour and Social Affairs, Federal Democratic Republic of Ethiopia: 2012.
[45] Launched by the Prime Minister of FDRE in June, 2003
[46] MOA, FDRE. Productive Safety Net Programme 4. Design Document. Addis Ababa, Ethiopia. Disaster Risk Management and Food Security Sector (DRMFSS), Food Security Coordination Direction, Ministry of Agriculture, Federal Democratic Republic of Ethiopia: 2014.

The PSNP approach also included a 'contingency' funding for those families or persons not able to carry out public works (e.g. elderly, chronically ill or disabled, children) but still without sufficient household food supplies.

As implementation of PSNP progressed, a number of adjustments and improvements were introduced, particularly to address 'exclusion and inclusion errors'. It was also realized that very few household were, indeed, able to graduate out of dependency of PSNP support. The main reason for this was the fact that the PSNP provided a 'minimum' daily support of food or cash which did not allow the beneficiaries to build up sufficient productive assets to lift themselves out of the 'poverty trap'. A complementary 'Household Asset Building Program', HABP, was designed and rolled out (essentially a savings-and-loan scheme for the poor).

As already mentioned, the PSNP has been the responsibility of the Department[47] of Food Security and Disaster Risk Management, DFSDRM, in the Federal Ministry of Agriculture and Rural Development and the implementation carried out by the agriculture sector right down to *kebele* level. The number of PSNP beneficiaries have steadily increased to an estimated 7.2 million at present and with a plan to further scale up to 10 million beneficiaries during the next phase of PSNP4. Again, it is important to repeat that the program and the corresponding involvement of agriculture staff was confined to the areas designated as food insecure!

Right from the beginning, there were strong voices that argued that the PSNP should be expanded to include broader nutrition objectives beyond the household food security focus. This was rejected due to fear that this would compromise the effectiveness of the program to achieve its household food security objectives. The nutrition work (read: food consumption and utilization parts of the 'food chain') should be addressed by other sectors, notably health. Notwithstanding this division of responsibilities, the work of addressing food insecurity, hunger and malnutrition at community level by necessity and default (it were essentially the same households suffering from all these challenges) involved agriculture extension and health extension workers together with *kebele* leaders and, often, NGOs and CBOs.

Given the emerging experiences of constructive multi-sectoral collaboration in the implementation of the PSNP and the shift of emphasis from acute, *wasting,* to chronic, *stunting,* undernutrition (the latter needing prevention rather than treatment) it was eventually decided that PSNP should be given a much clearer focus on nutrition outputs and outcomes[48]. The latest update of the safety nets program, i.e. PSNP4, has fully articulated this new focus and operational guidelines are being formulated accordingly[49], while operational research are put in place to carefully monitor the implementation modalities and outcomes of the revised program approach.

The table below is copied from the 2015 Global Nutrition Report (p. 45) and summarizes some of the key provisions that are being planned in order to make sure the PSNP 4 becomes more 'nutrition sensitive' than previous PSNP operational models.

[47] Originally Bureau for Food Security and….

[48] Bossuyt A. Increasing Nutrition outcomes of PSNP and HABP. Part 1. Main Report: Main report. Addis Ababa, Ethiopia: 2014.

[49] MOA, FDRE. Productive Safety Net Programme 4. Design Document. Addis Ababa, Ethiopia. Disaster Risk Management and Food Security Sector (DRMFSS), Food Security Coordination Direction, Ministry of Agriculture, Federal Democratic Republic of Ethiopia: 2014.

TABLE 4.3 Some nutrition-sensitive features of Ethiopia's latest Productive Safety Net Programme (PSNP)

New nutrition-sensitive feature	Nutrition determinant supported by feature	Added value
When a health post confirms that a woman is pregnant, she can transition from public works to direct support, which will continue for one year after birth. Co-responsibilities will link women with behavior-change communication services and additional health services available in their area. Women engaged in public works will have lighter workloads.	Maternal health	These features encourage closer collaboration between agriculture and health sectors, create demand for health services, and help reduce maternal mortality among the most vulnerable populations.
A co-responsibility option for behavior-change communication about infant and young-child feeding practices can take the place of participation in public works.	Infant and young child feeding practices	For better outcomes, behavior-change communication about infant and young-child feeding practices can include men as well as pregnant and lactating women.
Public works will be used to build homestead and school gardens. Participants will receive food baskets that include pulses and increased cereals, or a corresponding cash transfer increase. Livelihood support will help farmers diversify crops.	Dietary diversity	These features promote harmonization of nutrition-related activities by the ministries of education and agriculture. Building homestead gardens provides livelihood support for female-headed households with labor shortages.
Capacity development and income-generating activities will be targeted to women, including female-headed households. Activities will be developed to enhance women's control over the use of cash or food transfers.	Women's empowerment	Targeted inclusion of women works to increase awareness of and demand for related health services; nutritional outcomes in women and children tend to improve when women have greater control over household resources.
Participants will have co-responsibility for attending behavior-change communication on health, nutrition, sanitation, and family planning. Public works will be used to construct sanitary latrines and improved wells.	Water, sanitation, and hygiene	Allowing men and women with older children as well as pregnant and lactating women to attend behavior-change communication in place of public works participation may lead to change on a community level.

Source: Derived from Ethiopia, Ministry of Agriculture (2014b).

Among the components added to the PSNP4 design in order to enhance nutrition outcomes is to offer a 'temporary transition to direct support' (cash or food) for pregnant and lactating women, PLW, starting from the time of registration of pregnancy up to the time when the newborn child reaches 12 months of age. During this time period a 'soft conditionality' will be exercised to ensure the pregnant mother and the mother with newborn child participate in community-based nutrition activities such as social and behavioral change communication and growth monitoring and promotion. PSNP4 will also promote other links to social activities and services like day-care and health and hygiene in general and is putting emphasis on actions to support empowerment of women in general.

The PSNP4 monitoring framework will include indicators of such CBN participation and also regularly collect and report information on HH food security, diet diversity and child feeding adequacy. Nutrition status of children in HH supported by PSNP will be derived from DHS and similar surveys.

It is recognized that there are other 'social protection type' of program initiatives being implemented in Ethiopia which could also provide important experiences towards developing a *nutrition sensitive social protection* approach. The Most Vulnerable Household, MVH, methodology within the ENGINE program and the UNICEF Child Protection program in Tigray are mentioned as examples, but there are certainly many more initiatives that would warrant attention and review.

It is also recognized that at present there is an abundance of existing and emerging *nutrition sensitive* social protection programs and approaches being implemented and planned across many countries in the

world. The early examples from Brazil and Mexico are already well studied and documented, while many other Latin American countries have followed suit and so many countries in Asia and, more recently, Africa. The GoE and partners should take full advantage of these experiences and developments by linking up and partnering with such initiatives.

Finally, in the area of social protection there is a long-standing debate whether social protection is a way to 'cover up' social inequalities or should be a way to address these. The GoE would unambiguously aim for the latter and for this purpose it may be helpful to consider the guidelines and proposals written by the UN Human Rights Counsel Special Representative for Extreme Poverty[50].

To recap: the long-term solution for *nutrition sensitive social protection* in Ethiopia will come with the operationalization and roll-out of the new National Social Protection Policy and all efforts should be made to ensure that the process, right from the beginning, adopts a clear position and programmatic provisions that will ensure that this becomes a major instrument for addressing nutrition security in the future and especially as an increasing number of vulnerable households will leave agriculture and rural development livelihoods and see other types of employments.

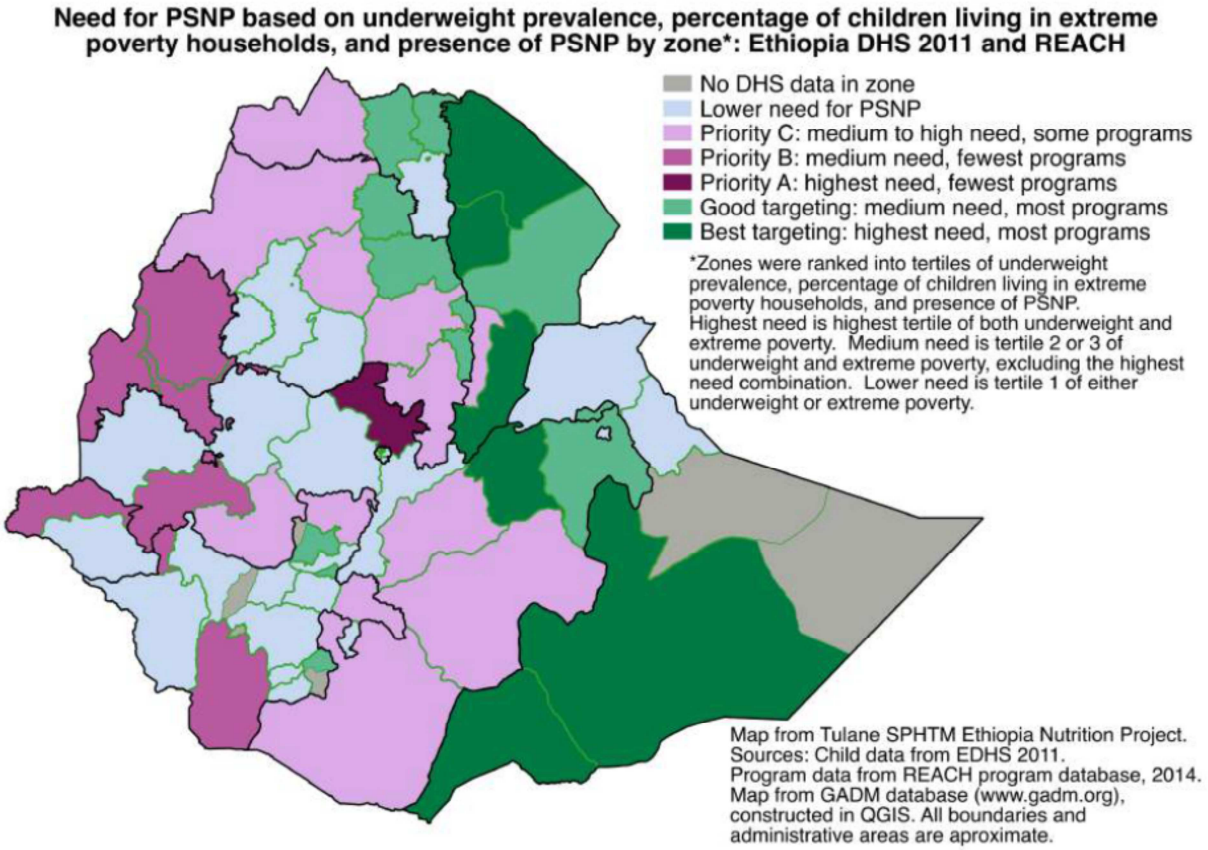
In the meantime, the fact that the PSNP now is becoming '*nutrition sensitized'* offers great opportunity to achieve short-term gains at the same time as important lessons can be learnt on how to achieve nutrition improvements through a social protection approach. As a critical adjunct to the work of improving nutrition outcomes of the new PSNP 4, this should also become a critical opportunity to build up harmonized and unified information systems.

The Tulane Complementary Analytical Report makes a special analysis of PSNP in relation to nutrition outcomes. It takes note of the reported positive impact of the program on HH food security and asset building but lack of direct evidence of nutrition impact of PSNP on stunting[51] and suggests that a much better integration of PSNP and CBN needs to be put in place. As noted above, this is already being addressed in the PSNP4 design document and implementation manual.

The report also uses PSNP coverage data compared to underweight and poverty indicators to demonstrate how mapping can be done to better establish priority areas for targeting (see below). It should be noted that the discrepancies highlighted in this particular map is largely due to the initial focus of PSNP to *food insecure areas/woreda.* However, as PSNP is presently transformed into a national program (and the same will apply to the National Social Protection Policy once operationalized) these type of mapping will greatly facilitate targeting and evaluation exercises.

[50] Sepulveda Carmona M, Nyst C and Hautala H. The Human Rights Approach to Social Protection. Helsinki; Ministry of Foreign Affairs of Finland: 2012.
[51] Hoddinott J, Berhane G and Kumar N. The Productive Safety Net Programme and the nutritional status of pre-school children in Ethiopia. Unpublished. Addis Ababa, Ethiopia: 2014.

Figure 3.26.



Findings and Recommendations Summary Table: Nutrition in Social Protection, including the Productive Safety Nets Program

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
The NNP recognizes that Social Protection is a major area of action for improving nutrition in Ethiopia	Very little has been done to operationalize and implement the planned NNP Social Protection initiatives (see Appendix 2)	As the MoLSA is now assigned the main responsibility for Social Protection, they – under guidance of the national SP steering committee - need to articulate their 'nutrition' roles and responsibilities, programs, work-plans and budgets at all administrative levels
An updated National Social Protection Policy – after years of preparations – was adopted in 2014	The National Social Protection Policy still needs to be translated into programs, activities, budget lines and, most importantly, capacity	The issue of nutrition needs added attention in the continued process of operationalizing the SP policy using relevant experiences from nutrition work in ongoing

		and past programs – *Lessons Learnt*
The SP policy provisions for nutrition security are not well articulated	Pilot program to operationalize PSNP4 nutrition provisions initiated with UNICEF support	Strong emphasis on 'nutrition sensitive programming' is needed in the MLoSA sector[52]
The major challenge in operationalizing the SP policy is the issue of capacity in the social welfare sector	The 'Labor and Social Welfare' sector will carry the main responsibility for implementation of the new SP policy but has presently very limited capacity to do so[53]	For the SP policy to have the intended nutrition impact, the MLoSW sector capacity development process has to include the necessary nutrition focus while maintaining a human rights focus
Another major challenge of the SP policy is the issue of fiscal sustainability. Presently, the GoE is focusing on infra-structure while requesting IDA support for social services, incl. SP	GoE spends a relatively small proportion of GDP on SP. Their medium to long term plans should reflect a move of some of the budget used on infrastructure towards spending on SP	SP fiscal sustainability crucial for long-term nutrition security. SP platform can commission a paper to examine critical trends?
Lessons Learnt 1: PSNP		
The Productive Safety Nets Program, PSNP, was initiated in 2005 as a food security safety net and has in practice become one of the largest social protection programs in Africa covering over 7.6 million people	The PSNP has gone through a series of revisions since during the course of implementation. Issues of 'food vs. cash' and 'graduation' given high priority leading to additions like HABP[54] and improved 'inclusion' procedures	Until the very last version, i.e. PSNP4, nutrition was not seen (and measured) as an explicit priority of PSNP but regarded as an 'expected' result of improved HH food security
The latest version, PSNP4, has adopted improved nutrition status as an explicit and outcome objective (to be monitored and reported), thereby making it formally a 'nutrition sensitive' social protection program	PSNP4 is still in a design phase with the PIM being drafted but very promising provisions are already being adopted, i.e. support for PLW starting right from registration of pregnancy and extending to 11 months of age of the child	Piloting of PSNP4 nutrition provisions being initiated as 'operational research' and will become very important for ensuring nutrition focus of the program
PSNP already found to provide 'nutrition-focused' support in many communities	Several examples exist where the local PSNP implementers are using the PSNP 'contingency' to support families with malnourished children	

[52] Likely to require Technical Assistance which should be linked to local capacity development in Labour and Social Welfare civil servants but also in the related Ethiopian scientific institutions

[53] The Ministry of Labor and Social Welfare has up to now primarily been responsible for issues of labor laws and child protection issues and has, for example, insufficient human resource capacity at operational levels (*woreda and kebele)*

[54] Household Asset Building Program,

PSNP has contributed to increased awareness of nutrition problems as the links between food insecurity and malnutrition is apparent for implementers, incl. DAs and HEWs, working together in the DRM/Food security and related committees at community level		
Lessons Learnt 2: Most Vulnerable Household, MVH, approaches	Promising experience exists of MVH as an avenue for nutrition actions adapted to conditions of nutrition vulnerable HH[55], but the coverage is so far very limited	Important to monitor and evaluate nutrition outcomes of ongoing MVH approaches
Lessons Learnt 3: Child Protection programs		
CP programs have worked with social service departments in several regions to pilot test the deployment of social workers with Tigray, Oromia, Amhara and Somali Regions standing out. The SP policy endorses the duty of all regions to build SW capacity and scale-up. In some cases SW networked with community committees and HEWs have formed a net for identifying and putting in place a family by family action plan for most vulnerable families	More needs to be learned about how social workers, local level social committees such as Community Care Coalitions and Food Security Committees and other social workers (e.g. HEWs) interact to identify most vulnerable households and implement a multisector "household program" to reduce their vulnerability. Region's plans for expanding their social worker cadre need to be finalized and budgeted.	Document the interaction between social workers, HEWs and local level social worker committees with a view to understanding better good practices and what can be improved.
Lessons Learnt 4: Examples from other countries		
For example, Mexico's Progresa reduced the poverty gap by 36 per cent and data suggest that the growth of children aged 12–36 months in beneficiary households has increased by 1 centimetre per year. Birthweight increased by 127.3 grams, and low birthweight was reduced by 4.6 per cent. Height increased	GoE and partners need to establish close collaboration and experience-sharing with other countries with SP programs. This should take place at policy as well as program levels and should include capacity development issues as a priority	There is presently very vibrant and active efforts to link SP development and program scale-up to nutrition outcomes in many countries, creating better knowledge-base for 'nutrition sensitive social protection programs'. Ethiopia should take advantage of these efforts to enable them to

[55] E.g. as implemented in many ENGINE sites

by 1.1 centimetres. In Colombia, children under 2 years old in households receiving cash transfers displayed an average increase of 0.164 in the z-score of height (translating into a 7 per cent reduction in stunting) and an 11 per cent reduction in the incidence of diarrhoea. Birthweight, perhaps the most important predictor of future nutritional status, showed improvements of 578 and 176 grams in urban and rural areas of the programme, respectively. Other relevant country experiences of successful SP programs include e.g. Brazil *Bolsa Familia,* Peru *XXXX, Kenya XXX* and Indonesia???		accelerate their own scale up of NNP Results Area 4.6

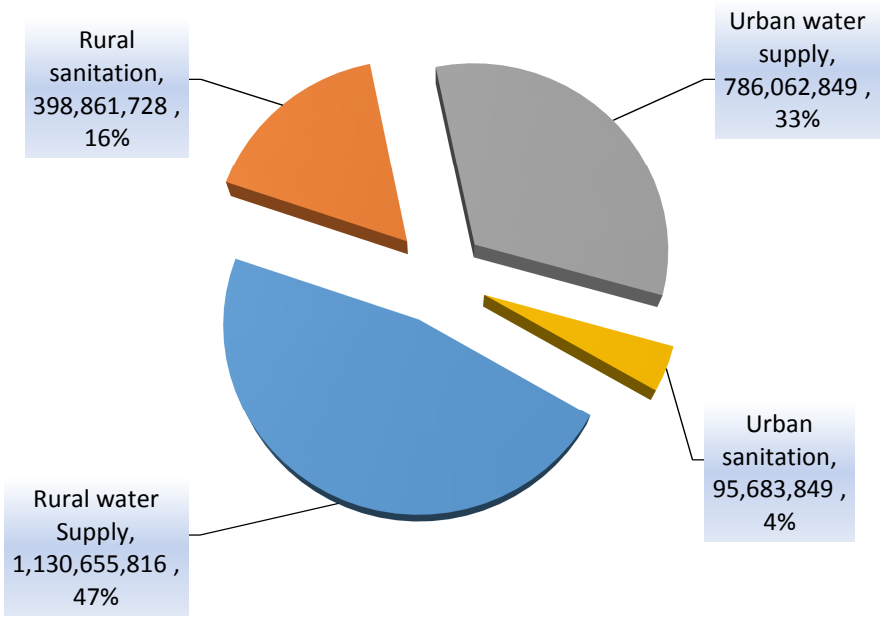
4.2.4: Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. WASH

Research Question: *Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies – Water, Sanitation and Hygiene, WASH*

The Government of Ethiopia recently (March, 2015) celebrated the fact that they managed to achieve the Millennium Development Goals, MDG, for water and sanitation. This is quite an achievement but recognizing that the country started from a very low level of coverage, this means that roughly half of the population still do not have access to a safe and reliable water source (if non-functioning systems are factored in) and that safe sanitation and hygiene practices are still not sustained in a consistent manner[56]. Recognizing the shortcomings of existing efforts the GoE and partners have recently launched a very ambitious One WASH National Program[57] with the aim to invest a total of 2,41 billion US$ during 2013-2020 to reach the targets of *universal access* set out by the Government Growth and Transformation Plan.

[56] HEP/WASH evaluation….. Please specify

[57] FDRE. One Wash National Program. A Multi-Sectoral SWAp. Program Document, Final. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia: 2013.



As indicated, the One WASH National Plan is a *multisectoral* effort including the Ministries of Water and Energy, Health, Education and Finance and Economic Development. The same ministries, together with development assistance partners and NGOs, already 2011[58] agreed to establish WASH Coordinating Committees and mechanisms at national, regional, *woreda* and *kebele* levels. Even at community level (i.e. within the *kebele)* there will be community WASH committees, WASHCO, to oversee and manage water points and implementation of CLTSH[59]. These coordinating mechanisms play a critical role in coordinating not only government sectors but also stakeholder inputs as evident from the following quote:

"The Program will be implemented as a joint effort between Government, development partners, NGOs, training institutions, the private sector, community members and other stakeholders. In addition to the Government, a number of Development Partners have expressed interest in supporting the Program through contributions to a Consolidated WASH Account at federal level. Other partners, including bilateral and multilateral aid organizations and NGOs, will support the Program through other funding arrangements, as well as through provision of technical assistance, supplies and other means." (OWNP)

There are obviously very strong similarities as well as potential overlaps between the WASH and the NNP coordinating mechanisms at different administrative levels. Instead, there should be very close linkages between these two multi-sectoral coordinating mechanisms given our findings from data analysis and from field visits that points to the important relationships between WASH and nutrition developments in Ethiopia. There is also a vast and growing body of global evidence on the relationships between WASH and nutrition developments (see below).

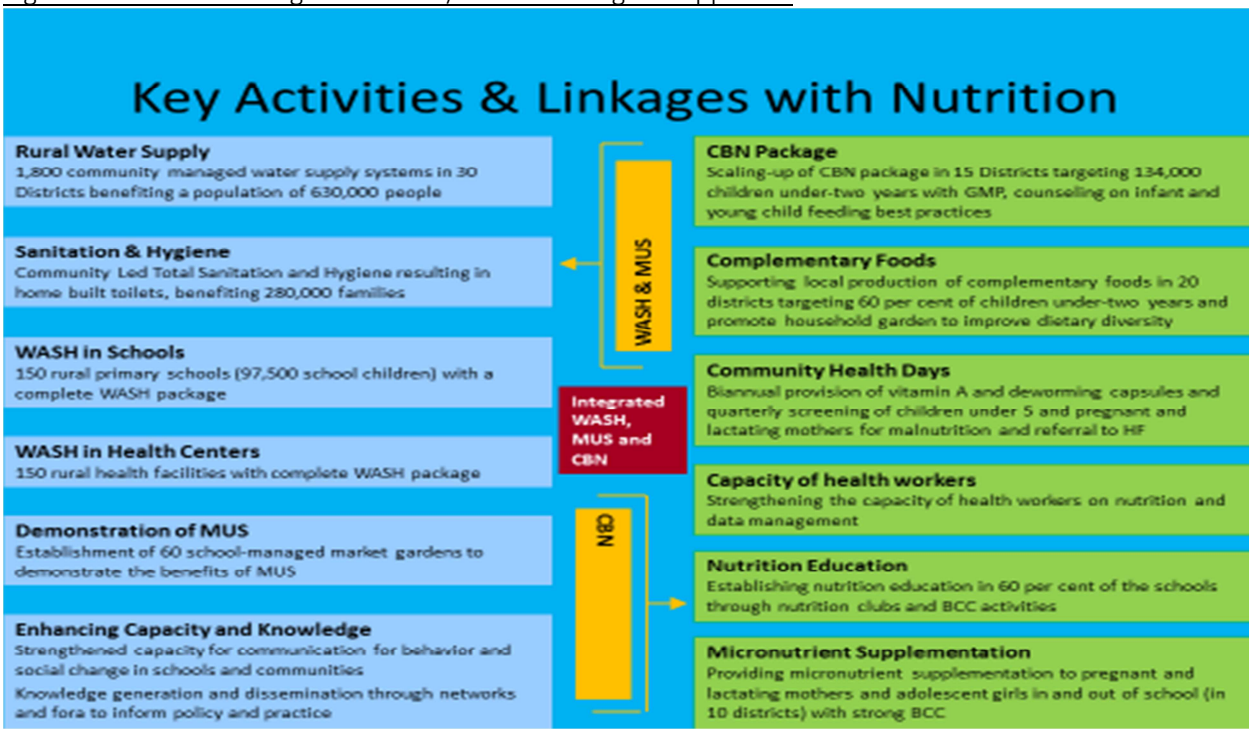
The problem is that the One WASH National Program does not mention nutrition!

[58] FDRE. The WaSH Implementation Framework (WIF) Summary. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia: 2011.
[59] CLTSH=community-led total sanitation and hygiene

Similarly, while the NNP recognizes that the Ministry of Water and Energy is a key sector for improving nutrition in Ethiopia, the corresponding initiatives and activities are not well articulated (NNP Results area 4.3, cf. Appendix 2) and sanitation and hygiene are addressed as separate activities within the health sector. Hence, the linkages between WASH and nutrition as two closely related, *multi-sectoral* and critically important development areas still need urgent attention and this should be addressed in both the NNP2 development process as well as in the OWNP review; both these processes are presently ongoing.

On the positive side, there are several ongoing projects and programs that explicitly endeavor to establish nutrition-WASH linkages and which will provide important insights and experiences on how this should be operationalized in different situations in Ethiopia. One of these efforts is the GoE-UNICEF WASH-nutrition program implemented in 55 *woreda* where WASH and nutrition program interventions are made to converge and the impact is carefully monitored (see figure below). Other programs with WASH-nutrition interactions include the EU/ECHO cluster approach and many NGO-supported nutrition programs with converging/integrated Social and Behavioral Change Communication, SBCC, with focus on both IYCF and CLTSH. Hence, there is an emerging body of important experiences and evidence in Ethiopia that need to be reviewed and translated into operational guidelines and scaled up.

Figure: GoE-UNICEF Integrated WASH/Nutrition Program Approach



Why WASH matters for nutrition developments.

The relationships between nutrition and water, sanitation and hygiene are many and have been described in considerable detail in global literature. Access to water is particularly critical for human life in general as it is required for multiple purposes starting from our need for safe drinking water, to water for hygiene and safe environment (control of infectious diseases) and food preparations, to water for food production and livestock. In countries dependent on rain-fed agriculture production like Ethiopia, rainfall often determines the overall situation of food availability and food security. Recognizing that securing sufficient amounts of water for domestic use often represents a major task for women across

most low income countries means that water also is a major determinant for the amount and quality of 'care' for children and women as an underlying cause of malnutrition in many situation. Therefore, as water affects *food*, *health* as well as *care* adequacy it can be argued that in many situations water really should be considered as a *basic cause* to malnutrition (see section 2). Our data on causes and trends **(Tulane Complementary Analytical Report)** certainly suggest that this is the case in large parts of Ethiopia.

Sanitation (safe disposal of fecal matter) and hygiene are more directly related to disease prevention behaviors and require water whereas poor sanitation and hygiene conditions may prevail despite access to safe water. They are, therefore, normally considered part of the 'health/healthy environment' condition[60] for good nutrition status, i.e. an 'underlying' cause in the conceptual framework for nutrition causality analysis (see section 2).

'Open defecation' has recently received considerable global attention as there seems to be strong and direct links between *Tropical/Environmental Enteropathy* and stunted growth[61]. "Open Defecation Free", ODF, communities has consequently become an important indicator in stunting reduction planning and evaluation efforts[62].

Sanitation and hygiene has improved very significantly in Ethiopia during the last decade[63] as it was an initial 'high' priority for the Health Extension Program, HEP, and strongly supported by formal, non-formal and informal education initiatives. The adoption of the 'Community-Led Total Sanitation and Hygiene', CLTSH, participatory development approach further improved the success rate of creating ODF communities. However, there are reports of slackened, non-sustained adherence to improved practices and insufficient attention to critical parts of the CLTS methodology as the approach is scaling up. GoE and UNICEF and partners are presently initiating a very comprehensive CLTSH evaluation exercise to establish any operational shortcomings.

Regarding access to safe water, progress has been impressive as already noted but far from sufficient. The One WASH National Program outlines a step-by-step approach to systematically and incrementally address water shortages in communities presently without or with unreliable access. In operationalizing this principle, however, there is a problem in the fact that many locations in Ethiopia do not have any water sources that can be easily and affordably explored and, as a result, the unit cost of providing safe potable water is rising dramatically. What is required is a shift to a new and more advanced level of technology, including remote sensing and establishment of 'water source master plans' for large areas of Ethiopia. This will require increased levels of technical and financial support from domestic sources and donor agencies.[64]

The Tulane Complementary Analytical Report provides a rather extensive analysis of relationships between undernutrition and WASH[65] indicators (p.45 ff.) which confirms strong correlational associations between

[60] Although strongly linked to 'care' as a child needs assistance to keep clean, hygienically fed and safely out of reach of fecal matter.
[61] Humphrey JH. Child undernutrition, tropical enteropathy, toilets and handwashing. *Lancet* 2009; 374: 1032-35.
[62] Chambers R and von Medeazza G. Reframing Undernutrition: Faecally Transmitted Infections and the 5 As. IDS Working Paper 450. Brighton, UK: Institute of Development Studies: 2014.
[63] DHS 2011
[64] Sam Godfrey, UNICEF, personal communication
[65] Mason JB, Potts KS, Crum J, Hofer R and Saldanha L. A Situation Analysis of the Nutrition Sector in Ethiopia. A report to UNICEF and EU. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2015.

access to water and sanitary facilities with childhood stunting, wasting as well as underweight. However, there seems to be a difference between children below and above 2 years of age, where the associations with sanitation are stronger in the younger age group while access to water seems more important among the older children. Moreover, the report finds a very strong interaction with maternal education where the children of mothers without any education seem to benefit very little from improved access to water while those of mothers with 'some education' have a significantly better response to improved water resulting in e.g. a stunting reduction of 10% on average. The report calls for a more in-depth analysis of this observation in order to ensure optimal under-nutrition reduction from household water source improvements.

The Tulane Complementary Analytical Report also found that the water source needs to be of high quality (piped water indoors or by stand-pipe) to give significant nutrition improvements. Even wells did not seem to provide this impact which is quite concerning as it would mean that close to 75% of all households in Ethiopia will require improvements of their water source in order to ensure good nutrition outcomes. Alternatively, the reasons for poorer nutritional impact of non-piped water sources need to be investigated further to explore better outcomes also in such situations. Unfortunately, it is not clear if the associations between stunting and type of water source is related to the 'urban factor'[66].

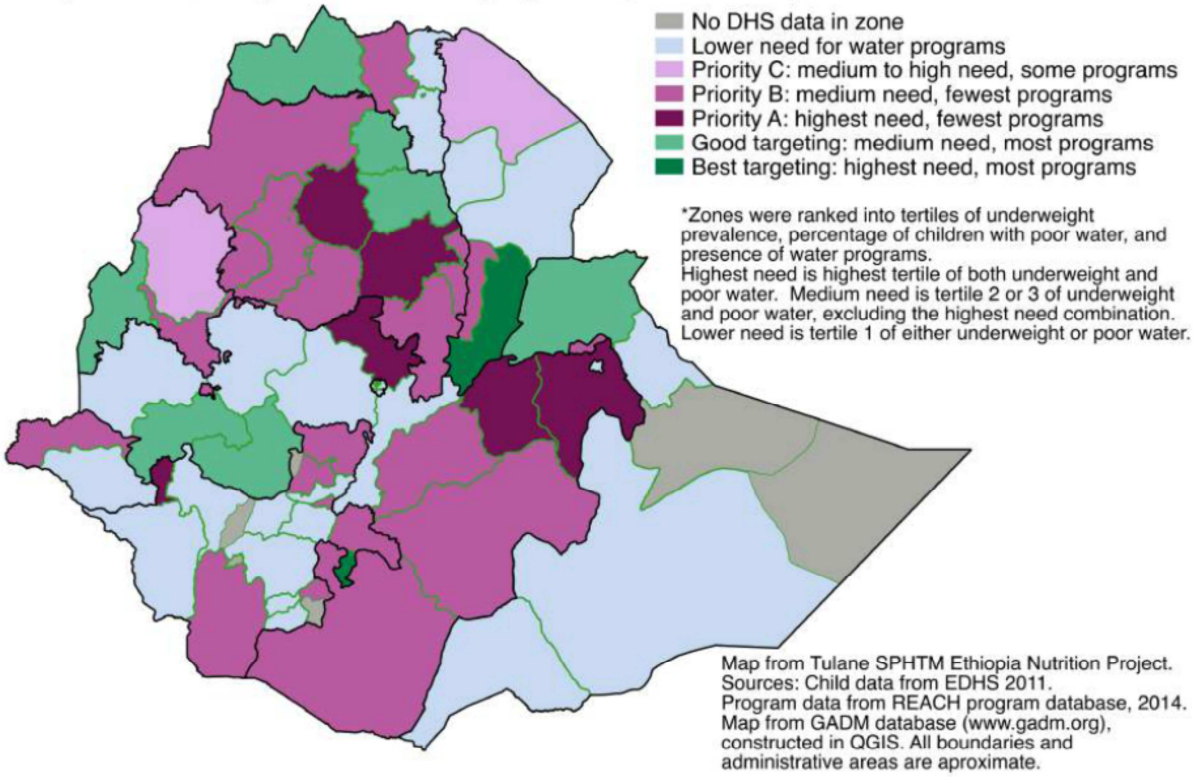
The Tulane Complementary Analytical Report goes on the map out geographical coverage of existing water development schemes and compare with prevalence of under-nutrition and finds that there are a series of zones (see Figure below) that should be considered as highest priority for future schemes. It is worth repeating that such targeting may turn out to be 'more easily said than done' due to the fact that identification of viable aquifers (total and sustained yield) requires sophisticated technology (including remote sensing) which is currently not widely available or affordable[67] in Ethiopia.

[66] Piped water, including standpipes, are typically urban phenomena and there is a consistently lower rate of stunting in urban compared to rural areas in all recent DHS's. In addition, the World Bank poverty report, 2011, clearly indicated that urban and urban-linked populations have had the strongest economic growth during the last decade in Ethiopia.

[67] This could constitute a major opportunity for ODA!

Figure 3.15.

Need for water programs based on underweight prevalence, percentage of children with poor water, and presence of water programs by zone*: Ethiopia DHS 2011 and REACH



Findings and Recommendations Summary Table: Nutrition in Water, Sanitation and Hygiene Sectors and Programs

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
The NNP recognizes WASH as a critical determinant of nutrition developments but does not adequately articulate corresponding initiatives and actions	NNP 2 development process to pay special attention to the need to articulate the WASH-Nutrition linkages	More in-depth research is needed to better establish the exact pathways of WASH-nutrition linkages in different settings to allow for optimal outcomes of WASH investments
One WASH National Program launched as a major effort to address the problems of WASH access and coverage	OWNP first implementation phase completed and review and planning for phase 2 initiated early 2015	OWNP does not explicitly refer to nutrition. Articulation of critical linkages should be part of the OWNP Phase 2 planning
The WASH Implementation Framework establishes WASH multisectoral and mult-stakeholder coordination mechanisms but without consideration of linkages to		Harmonization of WASH and NNP coordinating mechanisms and management information systems is critically important to ensure well-coordinated WASH and nutrition actions

corresponding NNP mechanisms		
The UNICEF WASH-Nutrition pilot and other similar program approaches to be encouraged and supported		The WASH-Nutrition pilot program and other similar integrated programs to be reviewed and inform NNP 2 as well as OWNP phase 2
The CLTSH approach well established and applied in Ethiopia with good results	Major evaluation of the CLTSH being initiated in 2015	The links between CLTSH and stunting reduction to be further and consistently articulated within the HEP, in education and in DRM
Rural water supply developments to be accelerated with special focus on areas with high levels of malnutrition	There is a need for new and advanced technology to be applied in many areas with rain and water shortages	Ethiopia to take a lead in developing *nutrition sensitive WASH development*

4.2.5: Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies. EDUCATION

Research Question: *Identification of issues associated with nutrition coordination and mainstreaming in sectoral policies and strategies – Education.*

Basic education is one of the social sectors which has developed rapidly and is closely linked to the dramatic socio-economic developments of Ethiopia during the last decade. It is consequently both a driver of these socio-economic developments at the same time as it has remained a major area of investment for the government recognizing education as a major avenue for change towards a more prosperous, peaceful, democratic and integrated Federal Democratic Republic of Ethiopia.
Starting from a very backward position where – for example – female literacy stood at a dismal 5% (!) in 1995, the country has made steady progress in terms of school enrolment, achievement and literacy as summarized below.

Table: Primary school (grades 1-8) enrolment (boys and girls) 200-2015…

Year	Gross Enrollment rate (GER)			Net Enrolment Rate (NER)			
	boys	girls	total	Boys	Girls	total	
2000/01	67.3	47.0	57.4	33.7	30.0	31.9	
2001/02	71.7	51	61.6	33.3	30.1	31.7	
2002/03	74.6	5.8	64.4	31.5	28.3	29.9	
2003/04	77.4	59.1	68.4	35.9	33.6	34.8	
2004/05	88.0	71.5	79.8	62.2	59.6	60.9	
2005/06	98.6	83.9	91.3	81.7	73.2	77.5	
2006/07	98.0	85.1	91.7	82.6	75.5	79.1	
2007/08	100.5	90.5	95.6	86	83.4.	83.4	
2008/09	97.6	90.7	94.4	84.6	81.3	83.0	
2009/10	96.6	90.1	93.4	83.7	80.5	82.1	
2010/11	99.5	93.2	96.4	87.0	85.3	85.3	
2011/12	97.9	92.9	95.4	86.8	85.4	85.4	

2012/13	97.9	92.1	95.4	87.5	83.9	85.7	
2013/14	104.8	97.8	101.3	95.1	90.1	92.6	

Starting from the year 2000, the initial emphasis was on enrolment through teacher training, building of class-rooms, social mobilization, etc. In 2008 the government has launched the General Education Quality Improvement Programme (GEQIP) (supported by the World Bank and other major donors) giving a strong emphasis also to quality[68]. While universal enrolment of both boys and girls at primary level (grade 1-8) is now close to 100%, the quality of achievements remains a challenge and there is still a significant problem of drop-outs at grade 1 and at higher grades and in areas where access remains low, such as pastoralist and other remote areas. These problems persist into secondary and higher levels of education where especially girls' participation remains a major concern.

In order to further accelerate education achievements among children from poor and isolated backgrounds, an Early Childhood Care and Education (ECCE) Policy Framework and strategy was launched in 2010. This initiative is steadily, albeit slowly, gaining ground and is expected to be further prioritized in an effort to achieve improved equity in education performance across social groups in the country.
In addition to the formal basic education system, there is also a *non-formal* option, i.e. Alternative Basic Education, ABE, to cater for children who have missed out of opportunity to enroll or dropped out for various reasons. The ABE option is organized for the first cycle of primary (grade 1-4) where the 4-year curricula is covered through an accelerated 3-year learning process and children who successfully complete the three-year program can enter Grade 5 in the formal primary school. The national ABE strategy (since 2006) has guided the extension and transformation of existing ABE centers into regular schools and the establishment of new ABE centers.

As yet another complementary opportunity for improving basic education levels among older people through an *informal approach*, the GoE has recently launched an Integrated Functional Adult Education (IFAE). The two-year IFAE Program for 15-60 year olds provides mother tongue reading, writing and arithmetic skills development integrated with practical knowledge and skills and is designed to make use of inputs from other development workers (agriculture, health, etc.).

The development priorities, planning and investments in the education sector is guided by the 5-year Education Sector Development Plan, ESPD. The development of ESPD V for the period 2015-2020 is just about to be finalized and implementation will start July 2015.

The links between basic education and nutrition improvements are multi-fold and well documented at global level[69]. Consequently, the NNP recognizes Education as one of the priority sectors in the Ethiopia multi-sectoral approach and outlines a series of initiatives and activities to be addressed in a *nutrition sensitive* manner. Some of these have already been reflected in the review of NNP Strategic Objective 1 (see Section 4.1 and Appendix 2).

[68] FMOE, FDRE. General Education Quality Improvement Package (GEQIP). Addis Ababa, Ethiopia; Federal Ministry of Education, Federal Democratic Republic of Ethiopia: 2008.
[69] E.g. World Bank (2011) Please specify

Development of policies and programs for 'education-based nutrition actions still need further work but the need for such actions is recognized and reflected in the latest Education Sector Development Plan[70] where the planned activities are based on the 2012 Ethiopia School Health and Nutrition Strategy[71].

For the purpose of providing a summary overview, the NNP education sector initiatives as well as other proposed education-based nutrition action are listed below:
a. Education as part of 'community-based nutrition'. The primary schools traditionally represents the 'center for children' in any community and should be a natural extension and part of the multi-sectoral nutrition approach and activities at community level. This is, indeed, already happening with the schools frequently acting as centers for *Enhanced Outreach and Child Health Day* activities. As the integrated *kebele* level multi-sectoral nutrition management and coordination mechanisms are elaborated and rolled out, the teaching staff and the school itself should play a key role. At present, this is sometimes but not always the case.
b. ECD and "Care". The important and central "care" factor in the conceptual framework of causality (Section 2) reflects the condition that without sufficient time, skills, understanding, and facilities for the child caretaker(s) there will not be adequate intake of nutrients or control of diseases even if sufficient food and health services are available. "Care" in this meaning is a complex factor but closely related to Early Childhood Development, ECD, and corresponding aspects of child psycho-social development as recently re-emphasized by a series of new research findings[72]. In Ethiopia, ECD is considered a multisectoral area and the government has launched an integrated Early Childhood Care and Education (ECCE) policy with a memorandum of understanding signed by three ministries - namely Ministry of Health, Ministry of Education and Ministry for Children, Youth and Women Affairs. The responsibility as interim coordinator is assumed by the Ministry of Education and this ministry has already provided important inputs both in nutrition training of HEW and in the drafting of the Family Health Care booklet. This engagement should be pursued further and more systematically in a more applied formative and operations research.
c. Nutrition in Secondary Education and Functional Adult Literacy Programs. These programs will engage young people and adults who may already be parents or are about to start their families. Hence, they will be more mature and keen to hear messages and learn about issues that will improve the health and nutrition situation in their families. So far these opportunities are not fully explored.
Nutrition in the Curriculum of formal basic and secondary education. Nutrition improvements in society will require a fundamental understanding of its basic principles and practical applications. The school curriculum consequently needs to be regularly updated with new findings and social developments (including obesity and NCDs) both at primary and secondary education levels as well as in relevant professional training institutions
d. School Feeding programs are in many countries serving a multitude of important purposes related to acceleration of nutrition improvements: providing extra meals for good education results, demonstrating and getting children used to healthy diets, social protection and school attendance objectives, etc. In Ethiopia, school feeding programs have primarily been focused on food insecure areas but the *2012*

[70] FMOE, FDRE. Education Sector Development Program IV (ESDP IV). 2010/2011 – 2014/15; 2003 EC – 2007 EC. Program Action Plan. Addis Ababa, Ethiopia; Federal Ministry of Education, Federal Democratic Republic of Ethiopia: 2010.
[71] FMOE, FDRE. National School Health and Nutrition Strategy. Addis Ababa, Ethiopia; Federal Ministry of Education, Federal Democratic Republic of Ethiopia: 2012.
[72] The Sackler Institute for Nutrition Science, Global Child Development Group. Every Child's Potential: Integration Nutrition, Health, and Psychosocial Interventions to Promote Early Childhood Development. New York, NY; The New York Academy of Sciences: 2013.

Ethiopia National Health and Nutrition Strategy, section 4.3.3 is shifting the focus to 'food insecure households' recognizing that school children from poor households in all areas will need to have their basic nutritional needs fulfilled in order to thrive in schools and progress in their studies.
e. Child-to-child initiatives are being tried in several Ethiopian schools and generally found to provide a good opportunity to use the local (primary) school as a 'community center' and center for communicating information to individual households using the children attending school. There are many good examples of this approach being applied for nutrition actions in Ethiopia and other countries.
f. School Health and Nutrition Strategy and initiatives exist in many places and includes school 'clubs' and designation and training of teachers to serve as facilitators and 'peer education' organizers. Again, many good individual experiences exist but need to be taken forward more systematically.
g. School Gardens have been tried in many locations; School garden program supported in 56 [73]*woreda* in Amhara, Tigray, Oromia, SNNPR and Afar has shown promising results including contributing to school feeding program for about 3 months in 11 schools in Amhara and Tigray. In addition to the demonstration of school gardens, Schools are benefiting from selling of school garden products. In few schools animal rearing like dairy cow and sheep and goats also have been tried often with mixed results due to insufficient resources and poor management. As improvement of diet diversity in households and in complementary feeding stands out as a key priority in Ethiopia, this is an option that should be better explored and combined with curricula development, child-to-child, school feeding, etc. Better coordination amongst actors in school gardening for skills and knowledge transfer. Integration of operational research with school gardening activities focused on behavior change amongst school communities on dietary diversity etc.
h. Adolescent girls (cf. Appendix 2). Adolescent girls attending upper primary school grades (and ABE) or secondary school are easy to reach for a series of interventions that can enhance their nutritional status (Iron/folate supplementation) and reproductive performance (delayed pregnancy, improved hygiene, reproductive education in general). This is yet an area poorly explored in Ethiopia.

Findings and Recommendations Summary Table: Nutrition in Education

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
The right to basic education in Ethiopia is well enshrined in existing policies and development plans	This is a priority that is well recognized and addressed by government and partners but with major challenges still to be overcome – especially quality and capacity differences between regional states	Nutrition is not recognized as an explicit outcome of basic education policies and programs but implicitly considered as closely related to education outcomes
Nutrition sensitive education actions are identified in the National School Health and Nutrition Strategy	The School Health and Nutrition Strategy is reflected in the latest 'Education Sector Development Programme V'	Acceleration of policy and program formulation based on ESDP V health and nutrition provisions (may benefit from TA and funding from partners
The NNP recognizes important initiatives and actions by the education sector in SO 1 (Result 1.1) and SO 4 (Result 4.2)	The NNP initiatives and actions related to the education sector have so far not been well elaborated, operationalized,	Education sector nutrition role and responsibilities to be operationalized at national, regional, *woreda and kebele*

[73] WFP Ethiopia, personal communication

	planned and resourced	levels.
As the NNP education sector roles and responsibilities are not yet well articulated, the nutrition coordination and mainstreaming within education sector as well as critical linkages to other key sectors still needs to be better defined and put in place at all relevant administrative levels	Requires urgent attention in the next phase of NNP planning and implementation	Requires urgent attention
Primary schools and PS teachers normally seen as the children's' center in most communities and should serve as an outreach base for good nutrition, health and hygiene practices	Important to make nutrition become an opportunity rather than an additional burden for basic education	Primary schools and PS teachers to be more systematically engaged in CBN
Special Areas of Focus		
Early Childhood Development is a comparatively unexplored area for acceleration of nutrition improvements	As ECD is now an adopted Education Sector Priority and rapidly scaled up, the potentials for nutrition linkages to be elaborated and operationalized in the context of different local settings in Ethiopia	Education sector and ECD specialists to engage in formative and operational research. Partners to support and facilitate knowledge sharing
Non-formal and informal education, i.e. ABE and FAL, offer great opportunity for applied nutrition education for adolescents and young parents		Nutrition component of ABE and FAL to be designed and implemented (learning materials can be adapted from existing IYCF materials)
Nutrition Friendly Schools Initiative	This WHO global initiative dating back to 2008 could serve as a starting point for comprehensive nutrition sensitive programming in Ethiopia	School-based programs, including school meals, gardens, WASH and health, etc. to be articulated towards comprehensive 'nutrition friendly schools' initiative[74]

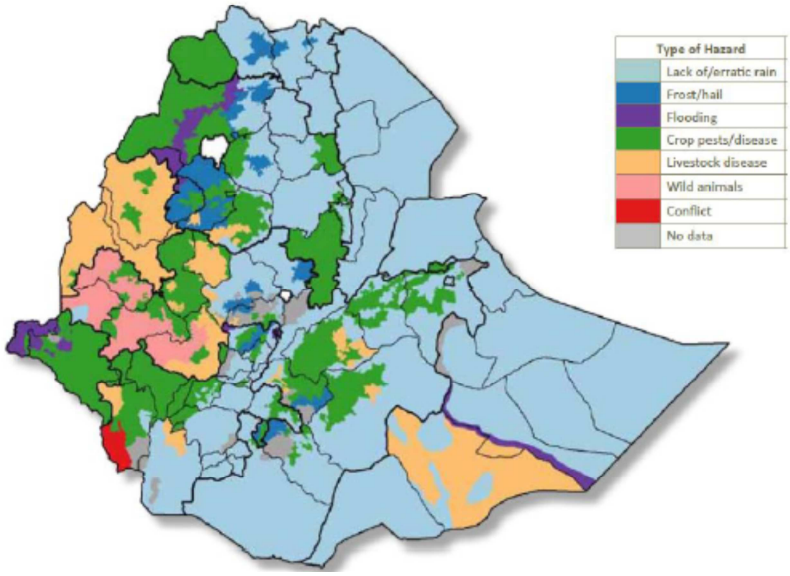
[74] WHO. Nutrition Friendly Schools Initiative. Geneva; Department of Nutrition for Health and Development, World Health Organization: 2008.

4.3: Analysis and recommendations regarding critical *cross-cutting issues*;

4. 3.1: Analysis of how far current and planned nutrition interventions link humanitarian with longer-term interventions

"Ethiopia is exposed to a wide range of hazards associated with the country's diverse geo-climatic and socio-economic conditions"[75] (*Note:* all figures in this section are copied from this reference, i.e. SPIF)

Figure 1: The Most Important Hazard (as perceived by rural households)[5]



Copied from SPIF

Ethiopia has had in place an impressive disaster risk and response management mechanism dating back to the 1970s. The emergency response to the large drought emergency 2002-2003 was particularly effective[76] in terms of both GoE collaboration and coordination with partners as well as minimizing the negative impacts of the drought on child malnutrition and 'excess child mortality'[77]. At the same time, however, the Prime Minister of the FDRE declared – in June 2003 – that the Government was launching a

[75] MOA, FDRE. Strategic Programme and Investment Framework. Addis Ababa, Ethiopia. Disaster Risk Management and Food Security Sector (DRMFSS), Food Security Coordination Direction, Ministry of Agriculture, Federal Democratic Republic of Ethiopia: 2014.

[76] OCHA. Focus on Ethiopia. Addis Ababa, Ethiopia; Office for the Coordination of Humanitarian Affairs (UN OCHA): 2004. http://reliefweb.int/sites/reliefweb.int/files/resources/2930E3D4605161E4C1256F63004DD69C-unct-eth-31oct.pdf

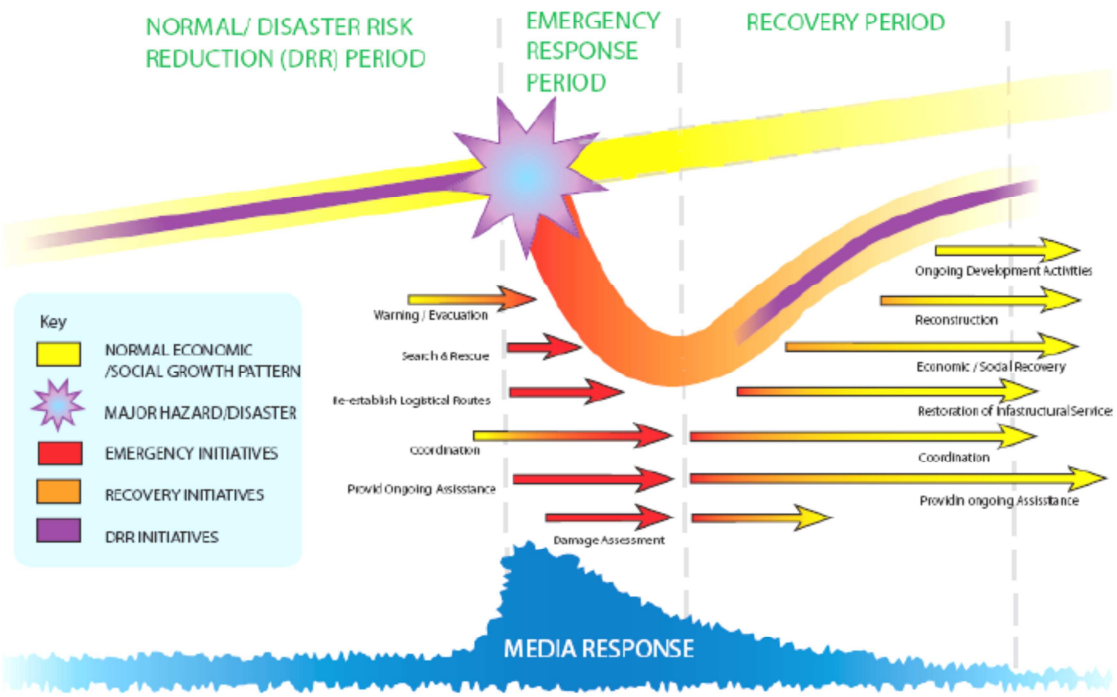
[77] A.de Waal (2005):…Lancet

'New Coalition for Food Security' in order to improve preparedness and response to (especially) drought emergencies and to erase the image of Ethiopia as the perpetual country of droughts and famines. The initiative included a number of actions (including PSNP, see 4.2.3)and was followed by a series of efforts to further improve the GoE Disaster Risk Management, DRM institutional framework and working procedures. In line with the latest DRM initiative, the old Policy on Disaster Prevention and Management from 1993 is being updated and expected to be adopted by Parliament in the very near future.

The DRM restructuring process has gone through a series of iterations during 2003-2014 with the onus of the DRM operation moving from a semi-autonomous Commission[78] to become a bureau and then a separate department within the Ministry of Agriculture emphasizing the link between food security and agriculture development (cf. Section 4.2.2). Considerable efficiency gains have been made as a result of the DRM-food security linkages but it has been increasingly recognized that DRM has to involve other sectors. Hence, the government has recently proposed to 'lift up' DRM/emergency preparedness and response to the level of the Prime Minister's Office in order to facilitate better coordination with all key line ministers and government functions[79] One of the main justification for this move was, indeed, to achieve a stronger linking of relief and recovery to development, i.e. LRRD.

The links between relief and rehabilitation and development is depicted in the new DRM 'SPIF'[80] as in Figure 2 below.

Figure 2: Disaster Risk Management Framework (Generic)

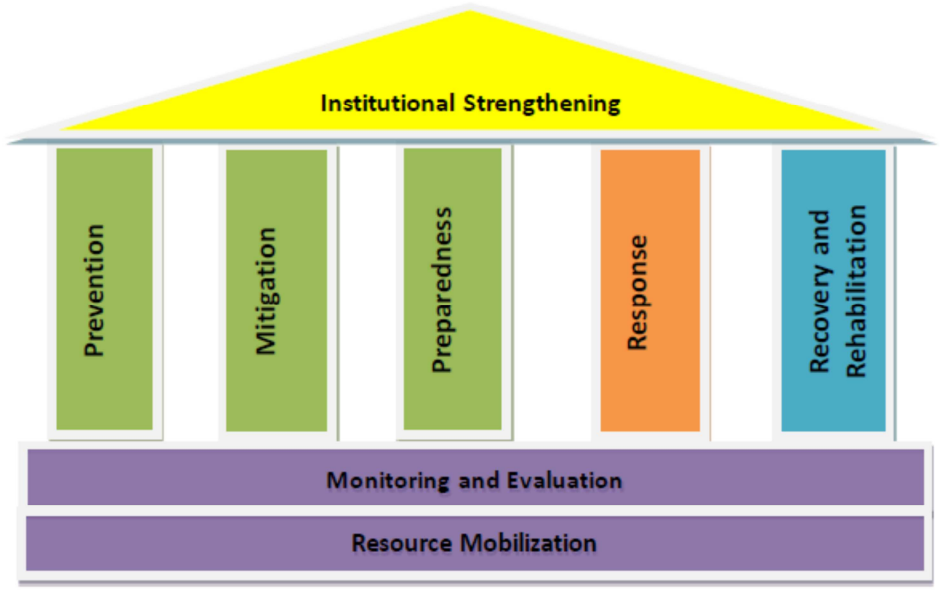


[78] Disaster Prevention and Preparedness Commission, DPPC (later DPPAgency during a transitional phase).
[79] DRM policy draft pending Parliamentary approval
[80] MOA, FDRE. Strategic Programme and Investment Framework. Addis Ababa, Ethiopia. Disaster Risk Management and Food Security Sector (DRMFSS), Food Security Coordination Direction, Ministry of Agriculture, Federal Democratic Republic of Ethiopia: 2014.

Copied from SPIF

The SPIF goes on to re-iterate the 'five pillars of DRM (Figure 3). These five pillars were adopted by the DRM process at an earlier stage but there was a persistent view that the last pillar, i.e. Recovery/Rehabilitation were never given sufficient attention and resource allocation. Part of the reason for this was the fact that most of the donor agencies providing emergency assistance to Ethiopia have separate funding 'windows' as well as operational modalities for emergency response and for 'development assistance'. Recovery and rehabilitation and, indeed, critical linkages between relief and development support, therefore, has a tendency to 'fall between the chairs'. This is a problem that has been recognized for some time and different initiatives have been taken to address the issue[81]. In Ethiopia during the 2003-2009 period, UNICEF and other partners adopted what has been called the 'roof-tile' (no leakage between the action blocks) approach[82].

Figure 3: Ethiopia's Disaster Risk Management Framework



Copied from SPIF

The later years discourse around the LRRD in Ethiopia has greatly been adopting a *Resilience* concept initiated after the 2011 Horn of African drought emergency. The concept is based on the principle that both emergency and development assistance as well as the government's own policies and programs should aim to strengthen resilience to shocks. Three levels of resilience are considered to be critical, i.e. individual, community and society. These three levels are all interlinked but requiring different strategic approaches for resilience-building[83].

[81] Richard Longhurst… Please specify IASC….

[82] Ljungqvist B. Child Survival in Ethiopia 1995-2010: moving out of extreme vulnerability. Addis Ababa, Ethiopia; United Nations Children's Fund, (UNICEF) Office of Emergency Programmes (EMOPS): 2009.

[83] Stephen Anderson, personal communicatioin

This definition and articulation of the *resilience* concept is potentially very useful in the context of accelerating nutrition improvements because the three levels of *resilience-building* closely corresponds to the three levels of causality in nutrition conceptual framework for causality analysis (Section 2), i.e. immediate, underlying and basic causes, respectively.

The discussions around conceptualization and operationalization of the *resilience* model is still in progress in Ethiopia and it is encouraging to note that many of the major donors, including the European Union, has adopted this model for their own efforts to LRRD.

The SPIF also recognizes the potential overlaps and contradictions between the DRM, the Climate Change Adaptation (CCA) and the Social Protection Policy and calls for a close coordination in the further operationalization of these policies in Ethiopia. This process of harmonization appears to fall right at the center of the LRRD nexus and should be carefully but proactively pursued by all partners under government leadership. In this process, nutrition considerations and outcomes can provide concrete tools as DRM-emergency response, Social Protection and CCA offer major avenues in building or protecting *resilience* at individual, community and society levels, respectively.

SPIF pays particular attention to the need for better coordination and linkages between the large numbers of different *DRM Information Systems* currently in use. Hence, the restructuring of the DRM management organizational framework should go hand-in-hand with revision and harmonization of corresponding DRM information systems and appropriate links to nutrition information systems in general (see Section 4.3.4).

As the GoE is now launching a very comprehensive effort to link relief and recovery to development efforts, it is important the major partners provide support and – to the extent possible – re-consider their own, internal obstacles for LRRD, including harmonization of emergency funding and implementation modalities. For example, it is very difficult to create meaningful local LRRD if emergency assistance is provided by very short-term contracts to external agencies (NGOs) with no mandate and capacity to engage in development work.

Returning to the original research question, i.e. *how far current and planned nutrition interventions link humanitarian with longer-term interventions,* the simple answer would be: not very much up to now! Throughout the Ethiopian relief and rehabilitation work over the last four decades nutrition has been seen as an outcome of emergencies and particularly for the drought emergencies leading to food insecurity, acute undernutrition and 'excess child mortality'. The main focus has consequently been to treat severe acute malnutrition, SAM and life-threatening infections (measles, malaria, pneumonia and diarrhea) in order to minimize excess child mortality. Little attention have been given to the links between emergencies and chronic undernutrition and the possibility to build *resilience* to shocks in the individual child through effective prevention of malnutrition in all forms.

LRRD in the area of nutrition should also lead to full integration of the CMAM program into the *routine* HEP (see 4.2.1) and mechanisms be worked out to ensure continued sufficient supply of RUTF as required for 'non-emergency' therapeutic feeding of children with SAM and with 'surge capacity' if required in emergency situations.[84]

[84] Modifications of the CMAM protocol should be explored to find ways to reduce cost and dependency on (imported) and expensive RUTF products.

Findings and Recommendations Summary Table: Nutrition in the context of Linking Relief and Recovery to Development, **LRRD**

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
Malnutrition in children and women affected by disasters and shocks recognized as major concern by GoE for very long time. The need for LRRD addressed from 2003 onwards	GoE-led actions towards LRRD captured in a series of DRM[85] policy papers and operational guidelines. The latest one, SPIF, provides very good and comprehensive plans for a LRRD approach and needs strong support from all partners to operationalize	GoE DRM traditionally focus on food security[86] rather than nutrition. This bias is gradually changing but needs further emphasis. The new SPIF hardly mentions nutrition explicitly. This needs immediate strong attention
Donor/Partner support for LRRD verbally strong but restrained by internal operational procedures and lack of capacity among 'emergency partners' to undertake development work and 'development partners' to undertake emergency work	Most Donors/Partners actively addressing the Emergency-Development dichotomy but major problems still remain in terms of funding and implementation modalities.	The Emergency-Development Dichotomy spills over into nutrition work by creating artificial and destructive divides at outcome levels (acute vs. chronic malnutrition, epidemic vs. endemic disease) as well as action levels.
'Resilience-building' launched as a constructive conceptual and operational approach to LRRD from 2011 onwards	'Resilience' is still to be fully operationalized and the ongoing discourse is, in fact, showing signs of fading out in some agencies	Nutrition sensitive 'Resilience-building' offers great opportunity to address nutrition in LRRD[87] and this must not be lost!
In some program areas LRRD is already taking place, e.g. PSNP/HABP moving from FS safety nets towards broad-based social protection. The same needs to take place across all relevant 'emergency' operations but without losing capacity to address recurring shocks and disasters	LRRD at program level requires capacity building and transformation. This presents new challenges for Donors and Partners/NGOs with distinct divides between emergency and development operations	LRRD at nutrition program level means transforming emergency nutrition, health, food, WASH, education, etc. into *nutrition sensitive ditto*. This is already happening with PSNP and aspects of health-based nutrition action but needs to be systematically pursued also in the other areas
Interestingly, LRRD is going on well in many emergency-prone areas at community/*kebele* level where HEW, DAs and *kebele* leaders are already used to work and coordinate emergency and	There are consequently many 'good practices' already in place to be learnt from and adopt into the LRRD processes	*Nutrition sensitive* LRRD at community level – especially between HEW and DA - to be reinforced, further improved and translated into relevant implementation guidelines and

[85] DRM=Disaster Risk Management

[86] This goes back to the 2003 'Food Security Coalition' focusing on lessening Ethiopia's dependency on Food Aid.

[87] The explanation is that nutrition issues easily translates into corresponding resilience outcomes and actions as already shown

'development' activities		trainings and promoted in non-emergency-prone areas.
The emergency/DRM coordinating mechanisms at *kebele*, *woreda* (zone[88]) and regional/national[89] levels need to be fully integrated/harmonized with corresponding development coordination bodies	The new DRM… policy provides guidelines and institutional arrangements that should support LRRD coordination. To be rolled-out asap	Regarding nutrition coordinating mechanisms the ongoing roll-out of NNP coordinating bodies to *woreda* offers good opportunity to establish strong functional LRRD coordination at operational levels

4.3.2: Identification of sectoral policies and development programs targeted towards pastoralists, and their progress to date

A significant proportion of the population in Ethiopia are *pastoralists* or *agro-pastoralists*. They make up the vast majority of the population in two of the Regional states, i.e. Somali and Affar R.S. and in large areas of south Oromia, southern SNNP and in Gambella Regional State.

Pastoralist populations in Ethiopia and elsewhere in the world are known to have exceptionally good nutritional status provided that they are able to rely on their traditional livelihoods with high levels of food intake based on animal sources and when they are able to use their livestock to 'buffer' against droughts and other shocks. Their livelihoods in Ethiopia, however, have now been under serious stress for many decades due to repeated and very severe droughts (especially Somali, Affar and South Oromia) and floods (especially in South Omo and Gambella areas), coupled with encroachment of their traditional grazing areas and civil strife (often related to control of these grazing areas). These conditions seem to be further exacerbated by effects of climate change during recent years. Additional and sometimes related factors like animal disease and trade barriers for livestock products have been added challenges.

As a result, many of the pastoralist areas in Ethiopia tend to provide the first warning signals for impending droughts and to remain vulnerable during extended periods[90] and the population in these areas tends to be disproportionally represented among groups identified for food aid and emergency support. In Affar Region, for example, during the time of collecting information for this report (April 2015), well over half of the population was being provided food aid and a very large number of the small children surviving on supplies of RUTF.

The problems of survival, hunger and malnutrition in pastoralist groups in Ethiopia have been subject to large amounts of studies and a long range of actions to better their situation. The pastoralists,

[88] Where applicable
[89] Including 'emergency clusters'
[90] Typically a drought situation leads to loss of grazing for the livestock which rather quickly stop giving milk. For small pastoralist children relying heavily on milk as a major source of food the transition from good/excellent nutritional status to acute undernutrition can consequently happen within a very short period. Even when rain returns and grazing becomes available the livestock will not resume milk production until after the next offspring is born and, hence, the vulnerable situation of pastoralist children will remain well beyond the time when the emergency drought is formally ended and emergency funding discontinued.

themselves, have adapted, persevered and attempted in different ways to combine their aspirations for sustainable livelihoods while preserving their traditional values and practices.

The 'good news' seem to be that livestock rearing and marketing is emerging as a viable option for many pastoralists as a result of improved livestock disease control and market improvements. The 'bad news' is that this option requires a critical minimum size of herd and capital to afford herders to take the flock to safe, usually far off places and to cover cost of feeds, livestock improvements, etc. when required. As a result, many small and middle-size pastoral livestock owners will continue to see their herds perish during harsh conditions and they will be forced to explore alternative livelihood options[91].

Hence, there is already an ongoing transition process taking place in most pastoralist communities in Ethiopia. What the government with support of partners needs to do is to ensure that this transition process is supported in a way that allows the members of these communities access to viable and acceptable options with minimum negative impact on their social and cultural identities. The world abounds with examples of such negative impacts (indigenous Indians in both North and South America, Aborigines in Australia, etc.) but such developments can be avoided in Ethiopia provided systematic efforts are pursued (many are already initiated) and properly resourced.

Unfortunately, this does not seem to take place at present where most pastoralist populations under severe stress are supported primarily by short-term emergency grants that keeps them alive but do little to preserve their livelihoods or provide viable alternatives. This certainly seemed to be the situation when the SITAN team visited Affar Regional State in April 2015 with over half of the population depending on food rations and large numbers of children surviving on Plumpy'nut while supporting development agents were operating on 2-3 months financing contracts with little chance to engage in long-term development efforts.

It is important to recognize that such pastoralist transition programs need to be highly context- and location-specific as the situation will differ significantly from place to place. It also seems appropriate to fully adopt the concept of *resilience-building* (see 4.3.1) to emphasize the need to not only build resilience at the individual level (which is essentially done now by keeping the population 'alive' and healthy) but also at community level with more development-oriented programs and activities and most importantly at society level by addressing more basic issues of viable livelihoods through water source developments, regeneration of selected graze lands, energy, economic zones and investments, etc.

Regarding links to nutrition developments there are also a wide range of more forward-looking initiatives that need to be explored, including efforts to ensure reliable supplies of milk, "Milk Matters"[92], and providing food support in ways that builds upon local traditions and opens opportunities for local products to complement food aid provisions. RUTF ("Plumpy'nut") should be used for treatment of SAM and not for general survival and prevention!

Findings and Recommendations Summary Table: Nutrition in Pastoralist Areas

[91] … Please specify

[92] Sadler K and Catley A. Milk Matters: the role and value of milk in the diets of Somali pastoralist children in Liben and Shinile, Ethiopia. Medford, MA and Addis Ababa, Ethiopia: Feinstein International Center, Tufts University and Save the Children: 2009.

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
Pastoralist livelihoods threatened by several factors, incl. graze land loss, climate change, commercialization, etc. as recognized in GoE GTP	Continued attention and fast-tracking of strategic solutions applicable for specific pastoralist communities	Establishment of nutrition unit in MoA should pay special attention to pastoralist area nutrition problems and solutions
Comprehensive livelihood (GTP) plan to be agreed and implemented systematically and persistently	In case of Affar RS, no such plan in place; fragmented and short-term actions need to be transformed into coherent, well-resourced and well-managed approaches	Ongoing emergency response work at individual and community levels to be aligned with longer term nutrition actions based on emerging livelihood options
Great diversity and rapid transition of livelihoods already exist between as well as within 'pastoral areas' and need to be recognized	This will require 'area-based' (*woreda*) planning where viable livestock 'herding' options are recognized and supported while pastoralist 'drop-outs' are supported to find alternative livelihoods	*Woreda* nutrition planning based on local conditions and solutions, i.e. available foods and acceptable practices. Example: 'Milk Matters' approach where viable; alternative crops (maize, moringa, …), local markets for exchange and to enrich diets and child feeding
Water availability (for humans, animals and crops/grazing) most decisive livelihood factor in most pastoralist areas	Water development and water resource management must be central in pastoralist area planning	'Nutrition sensitive' water development key to improving nutrition in pastoralist areas
Capacity-building in key sectors (health, agriculture, etc.) in Affar and other DRS to catch up with national standards	Ongoing process and progress noted in e.g. HEP. To be further accelerated as much as possible	Maintain transitional implementation modalities, e.g. EOS and mobile health teams, until sufficient capacity is in place for effective 'routine' nutrition service provisions.
Affar RS (and other pastoralist areas) are in almost perpetual state of emergency	Strengthen 'resilience'-based approaches to LRRD	Maintain effective emergency nutrition response while building capacity and programs for sustained nutrition security

4.3.3: Multisectoral Nutrition Coordination and Management

Research Question: *Analysis of how sectoral policies are complementary and align with intended outcomes of nutrition interventions.*

Explanation: The SITAN team interpreted this research question to refer to the mechanisms in place to align and coordinate sector policies and programs to nutrition outcomes, i.e. what is generally referred to

as ' Multi-sectoral Nutrition Coordinating Mechanisms' and which are defined in more detail in the NNP Strategic Objective No. 5.

Although for a long time now, there has been a general understanding and agreement that elimination of malnutrition requires a 'multi-sectoral' approach such arrangements have rarely been put in place and the track records of successful multi-sectoral work at scale is rather weak. The global SUN movement seems to have created a change in this regard as it is built on the premise that 'no sector and no actor can alone can solve the problems of malnutrition'.

As a result, almost all countries that have joined the SUN movement (now over 55) have put in place multi-sectoral coordination and management structures. These structures are either anchored in a 'line ministry' – usually health or agriculture – or at a central 'coordinating' ministry or agency like the President's, the Prime Minister's or the central Planning office. The experiences from these efforts are still mixed as questions of governance and management effectiveness of these arrangements continue to be raised[93].

In their book on the topic of multi-sectoral work in nutrition[94] J. Garret and M. Nataliccio, based on three country case studies (Peru, Senegal, Columbia), conclude:

"These case studies exhibit two examples of approaches taken to working multisectorally in nutrition that reflect new understanding about how to solve complex social problems. Despite different country conditions and operational contexts, close analysis shows that the initiators, creators, and managers of these programs shared certain values and methods. We do not argue that these are the only ways of achieving multisectoral success in nutrition. Nor do we argue we have identified causal links between these factors and guaranteed success. But we have shown an association between the nature of these approaches and operational success. The case studies confirm that working multisectorally in nutrition is possible, although it may mean changes to the usual ways of working and thinking. It may also involve a process that develops a strategy for action that is more reflective of partner needs, conditions, and context than is traditionally the case. These examples strongly suggest that addressing complex social problems, like nutrition, will need to go beyond sector-bound and single agencies. Because of the need to coordinate action among multiple agencies, arriving at a solution will require an inclusive process (of institutions and actors) and lateral, rather than top-down leadership.

The focus on process emerges from an understanding that many of these problems, such as nutrition, result from the operation of complex systems. Understanding how to devise and manage dynamic, multi-agent, multi-institutional processes is an emerging facet of modern management. These case studies can help us begin to understand how we might better manage the dimensions of complexity, including possible strategies and the conditions needed to support them, such as the importance of shared vision, the need for institutional incentives, and an understanding of how others gauge costs and benefits of participation."

Two issues stand out as particularly important from their analysis:

---

[93] Alderman H, Elder L, Goyal A, et al. Improving nutrition through multisectoral approaches. Washington, D.C.; World Bank Group: 2013. http://documents.worldbank.org/curated/en/2013/01/17211210/improving-nutrition-through-multisectoral-approaches.

[94] Garrett J and Natalicchio M. Working multisectorally in nutrition: principles, practices, and case studies. Washington, D.C.; International Food Policy Research Institute (IFPRI): 2011.

Leadership, assuming responsibilities and accountability while exercising effective management

Complexity, understanding that problems of nutrition in society are outcomes of complex (not predictable) processes and, hence, need to be addressed through iterative learning and adaptive planning approaches (such as Triple-A, See Section 3).

In a more recent study comparing experiences of multi-sectoral nutrition work in Peru, Brazil and Bangladesh, Levinson and Balarajan[95] emphasize the importance of convergence of (health-based) nutrition specific and (non-health) nutrition sensitive actions in vulnerable areas and population groups. However, they caution that "multisectoral coordination cannot be a substitute for well-designed and, ideally, convergent programmatic action". In other words, multisectoral coordination is not an end in itself but a means to achieve more convergent and harmonized actions in support of families and communities at risk of malnutrition.

In Ethiopia, the National Nutrition Strategy of 2008 became an official declaration of the need for a multi-sectoral approach to nutrition although this intention was not well articulated and operationalized until the NNP 2013-2015. The NNP 2013-2015, as abundantly reflected in this report, not only identifies key sectors and partners that should be involved in the process but also defines terms of reference and composition of nutrition coordinating mechanisms at different administrative levels.

The Ethiopia 'model' proposes two-layer structures at federal, regional and *woreda* levels with a 'coordinating body' where official representatives of the participating sectors and partners are given overall decision-making authority but supported by a 'technical committee' comprised of technical staff from the same sectors and agencies who will be able to discuss and make recommendations on detailed matters before they are sent to the 'coordinating body' for decision. This appears to be a very practical way of avoiding to 'pin down' busy policy-makers and decision-makers in long complicated technical discussions while, at the same time, recognizing that such discussions need to take place.

Within the context of multi-sectoral involvement and coordination, the GoE has maintained that the health sector provide the leadership in the process and act as a convener and a secretariat to the coordinating bodies and technical committees at different levels. This decision is clearly reflecting the fact that most of the technical competencies related to human nutrition are housed in the health sector.

The Ethiopia NNP coordinating mechanism has been formally in place at national level since 2008 but it is only recently that the system is being rolled out and extended to subnational levels – with special focus on the *woreda.* The SITAN team had a chance to interview some *woreda* officials who had recently participated in integrated nutrition training sessions and they were all very excited and keen to take on their new nutrition challenges and responsibilities. However, they were all concerned that a one-time short training session would not be sufficient to enable them to fully understand and manage the complexity of multi-sectoral nutrition planning, implementation and reviews. In addition, they emphasized the need for continued high level and effective advocacy and communication actions in order to maintain a strong public support and focus on nutrition.

Multisectoral coordination of nutrition policies and programs at different administrative levels is critical for the purpose of ensuring policy coherence and that different programs and actions are directed in

[95] Levinson JF and Balarajan Y. Addressing Malnutrition Multisectorally: What have we learned from recent international experience? UNICEF Nutrition Working Paper. New York; UNICEF and MDG Achievement Fund: 2013.

support of nutritionally vulnerable communities and social groups at the right time and place. In the final end, however, the effectiveness of multisectoral nutrition work will depend on how the different sectors and participating agencies are able to become mutually supportive and harmonize their actions at operational level, which in Ethiopia primarily means the *kebele.*

The NNP does not at this stage plan to have *kebele* level coordination mechanisms exclusively for nutrition but anticipates that existing management structures and mechanisms at this level will assume direct responsibility also for coordination and management also of nutrition action. The NNP, however, is quite explicit in insisting that women-based structures (women's association, women development army, etc.) are given a strong role in this community level coordination of nutrition.

While studying the ongoing roll-out of the NNP coordination mechanisms, the SITAN team became aware that significant intersectoral nutrition coordination has already been ongoing for quite some time and has, indeed, been particularly focused at *kebele* level (food security/DRM/PSNP committees, *command posts,* etc.). Such existing 'multi-sectoral'[96]coordination mechanisms have been primarily evolving from a 'multi-sectoral' approach to disaster risk management, DRM. There has been a strong general recognition (especially after 2000/2001 Horn of Africa drought emergency) that drought emergency response should not constitute 'food alone' but include emergency health, nutrition, water and even education, HIV/AIDS and protection (primarily for IDPs). Hence, emergency response in Ethiopia has, indeed, been organized with effective multisectoral as well as multi-stakeholder coordination. The dominance of drought and food insecurity related emergencies in Ethiopia has also meant that nutrition – in this case acute malnutrition (wasting) - has been and still is a key issue and focus of emergency operations (cf. section 4.3.1).
The SITAN team consequently recommends that the issue of nutrition coordination at *kebele* level be given further consideration and guidance and that in this process the good experiences and ongoing work of existing 'multi-sectoral' work – especially in the DRM context – be given recognition and, where possible, acting as a foundation for taking these processes further.

Findings and Recommendation Summary Table: Multisectoral Nutrition Coordination and Management

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
The most relevant GoE policy reference related to the research question is the NNP, SO 5.	A review of NNP SO 5 implementation is presented in Annex 2. A number of activities are ongoing but there are also significant gaps	See Annex XX Education, Trade and Agriculture Sector. Sector Plans and Policies: Education: School, Health and Nutrition Plan Trade: Food Fortification Plan Agriculture: PSNP

[96] There are no formal 'sectoral' structures at *kebele* level but most of the key sectors are represented by their 'front-line workers', e.g. school teachers, health extension workers, agriculture development agents, and they all work under nominal coordination by the *kebele* administrator and collaborating with local leaders of women's and youth associations, faith-based organizations, etc.

Institutional structures[97] for MS coordination are well defined in NNP and roll-out (formation and training) is ongoing	Continued roll-out and capacity building of NNP NCB and NTC at national, regional and *woreda* levels and establishment of nutrition coordinating structures at *kebele* level	Recognize and build upon already existing MS nutrition coordinating mechanisms (*"command post",* etc.) where they exist
Prerequisite conditions for functioning MS Nutrition Coordinating Mechanisms		
a. Shared awareness and understanding of the problem and commitment to change	This is part of the NNP roll-out training workshops but need for refresher training already apparent	National, ongoing 'nutrition education and communication' process to be planned and initiated
b. Common results framework, CRF, with detailed sector plans	Many identified key sectors still lag behind in developing (nutrition) action plans at national level; regional and *woreda* level planning just initiated	Technical support to develop CRF – especially at regional and *woreda* levels. Guidelines for *kebele* level work
c. Financial, human and material resources	Resource allocations for support to CRF, including relevant budget lines	Critical nutrition-related actions will require 'earmarked' allocations and designated staff
c. Effective MS management information and accountability systems		See Section 4.3.4
d. Adaptive Programming and Participatory Learning	Acquiring the capacity and practice of adaptive management during the scaling up and implementation of the NNP, by strengthening an ability to be effective in implementing and managing the NNP Collaborative Learning and Sharing to stimulate instrumental learning among NNP actors about implementation bottlenecks and strategies to address them	Tracking of progress at zonal and woreda levels and below, identifying and resolving bottlenecks, and learning and adapting based on experience, i.e. Triple-A.

[97] The NNP coordinating mechanisms are divided into two 'layers' at each level: the Nutrition Coordinating Body, NCB comprising of sector heads and the Nutrition Technical Committee, NTC, comprising of the technical staff from the identified nutrition relevant sectors plus (normally) selected representatives from partners.

Operational Research Component for NNP SO 5 established[98]	Operational research transformed into 'Action research' to iteratively develop, apply and evaluate methods to foster stronger collective action in support of the NNP, including mechanisms for generating real-time feedback to stimulate and guide collective action.	Create, support and facilitate collegial learning platforms at regional level, to assist each sector in identifying and operationalizing feasible and effective nutrition-sensitive actions. The learning platforms includes university focal points who do the operations research as they identify topics

4.3.4: Nutrition Management Information Systems, NMIS

Research Question*: Identification of gaps in program monitoring and oversight with recommendations for corrective action*

Multi-sectoral and multi-stakeholder nutrition management mechanisms require *nutrition management information systems, NMIS*. Recognizing that the problems of *nutrition in society are complex*, i.e. not fully predictable[99], means that the NMIS must be designed so that the nutrition managers/management structures will have access to critical management information at the right time in order to take management decisions on corrective or additional/complementary actions. Hitherto, a comprehensive NNP NMIS has not been in place in Ethiopia, i.e. a system able to capture key developments, implementation coverage, outcome and impacts of NNP 'initiatives' and activities. The national HMIS is capturing some nutrition indicators but it is generally recognized that this information has limitations in terms of effective coverage, time delays, etc. and serves more as an 'administrative MIS' reflecting utilization of services rather than an epidemiological MIS reflecting actual changes in the nutrition situation.

In the absence of a NMIS that provides continued update of the nutrition situation in Ethiopia, it is the periodic DHS and, to some extent, the household budget surveys that provide information on nutrition developments in the country. These data sources are also subject to analysis and discussions regarding positive and negative trends in the nutrition situation across Ethiopia and how these trends may or may not be related to specific programs or broader development processes (exemplified by the present SITAN exercise). These periodic surveys, i.e. DHS and HBS, are likely to remain the main 'benchmarks' for nutrition developments in Ethiopia in the foreseeable future but it is important to recognize the inherent limitations of these data (see also 'methodology' section in Tulane Complementary Analytical Report, pp. 7-17). To the extent possible, it is also important to make sure that future implementation of these type of surveys pays sufficient attention to quality of data collection and opportunities to include

[98] GoE-EU-UNICEF Cornell University supporting broad national operational/action research approach

[99] Ljungqvist B and Jonsson U. Nutrition Information Systems in Complex Societies. Statement at the FANUS African Nutrition Conference; supplementary materials: 2015.

complementary indicators that could shed light on critical factors hitherto excluded (preparations for the 2016 DHS soon to commence).

Even if there is no comprehensive NMIS linked to the NNP, there are still in place a number of systems responding to different, specific nutrition management requirements. These include the information systems relating to nutrition in the emergency context, e.g. CMAM, 'hotspots' MIS and HRD[100] but also those systems monitoring the coverage of periodic Vitamin A Capsule supplementation and de-worming. As noted in section 4.2.3 on Social Protection/PSNP, there is a strong recommendation to integrate beneficiary registers and monitoring systems into existing NMIS in the future.

In general, the SITAN team found that the emergency-related HRD and 'hotspots' monitoring systems will be difficult to integrate into a comprehensive NMIS (such as the NNP Monitoring Tool, see below) at present due to the *ad hoc,* semi qualitative methodologies employed.

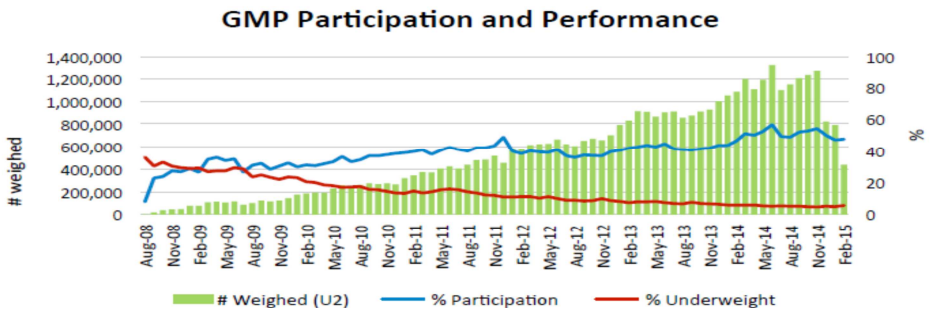
The 'CBN' monitoring system is a special case as it was initiated to monitor the results of the CBN pilot program starting back in 2008 but has incrementally been expanded to capture GMP weighing data as the new, 'comprehensive' CBN is scaled-up (see section 4.2.1). Another, potentially important initiative is the BIN (bi-annual nutrition) surveys in that allows for more detailed tracking of nutrition developments in selected *woreda*s. This is an example of a 'repeated SMART survey' methodology which is promoted by some agencies as an important tool for stunting monitoring[101]. In Ethiopia, expanded use of the BIN to monitor specific *woreda* nutrition development processes should be explored – so far it has been linked to ENCU survey activities which have primarily been emergency oriented.

The FMOH Nutrition Unit have been supported by UNICEF to explore improved nutrition information systems in Ethiopia and this initiative has recently been able to design a comprehensive 'NNP monitoring tool', NNP MT, which includes a series of existing FMOH nutrition data sources: CBN, CMAM, VAS/deworming, and generating national and regional trends, summaries and cross correlations. A good example of the capacity of the NMT to generate a summary of nutrition impact in relation to action is the graph presented by the **Tulane Complementary Analytical Report** on child participation and underweight within CBN program areas. The graph is copied below:

[100] HRD=Humanitarian Requirement Document, with its corresponding data collection process
[101] WHO/CDC: : Please specify

Ethiopia Nutrition Analysis (July 2015)

Figure 1.2 Reduction in child malnutrition (underweight) and increased participation in CBN, 2008-15.



Source: UNICEF nutrition database

The NNP Monitoring Tool is presently reviewed by the GoE in preparation for a national adoption and rolling out process. At the same time, the government is considering adopting the approach of National Information Platform for Nutrition as initiated is some other SUN countries. Whatever methodologies and tools are adopted the bottom line is that Ethiopia is presently in a situation where all nutrition information – old and new – should be fully coordinated and harmonized. A related issue is to ensure that GoE ownership is clearly established and also – as a particular issue – clarify the respective roles of the Nutrition Department within the Federal Ministry of Health as the secretariat for national nutrition coordination and management and the Ethiopian Primary Health Institute as the secretariat for NNP research coordination.

A final comment from the SITAN team observations is that all NMIS efforts so far seem to be focused on national and regional levels with the *woreda* assuming main responsibility to collect and compile data. In line with our emphasis on the importance of community/*kebele* level action and management of nutrition, we believe there is a strong need to develop and put in place systems that will allow these key actors a local/operational level to clearly assess, analyze and take action (Triple A) on their problems of malnutrition. As we now observed, the health extension workers were very busy collecting, compiling and reporting nutrition data but they are not using these data themselves nor the *kebele* committees addressing local nutrition problems.

As noted in section 4.2.1, we believe that Growth Monitoring and Promotion, GMP, appropriately re-organized can serve as an effective, community-based NMNIS and that all evidence of properly conducted GMP in Ethiopia so far is one of the very few interventions with clear impact on stunting reductions (for more details see Tulane Complementary Analytical Report, p.298 ff).

Findings and Recommendations Summary Table: Nutrition Management Information Systems

Identified Problem related to overall GoE Policy	Actions needed, general	Specific actions needed for accelerated nutrition impact
Monitoring and evaluation for the NNP will be integrated into an overall M&E system for evaluating for NNP implementing sectors. (NNP, Chapter 5)	This system (or systems) are still to be fully developed and adopted. An 'NNP monitoring tool' (NNP MT) has been designed (capturing most relevant nutrition data sets) and needs to be adopted, adapted (as needed) and rolled out	Outstanding design issues in the NNP MT to be addressed urgently
Once the 'core' NNP MT is decided, other related or complementary systems and approaches should be linked in to allow for comprehensive, multisectoral MIS (NNP MT should still remain core mechanism for tracking and synthesizing nutrition info)	Proposal: GoE leads review with relevant partners to align existing (incl. sectoral and HRD/ENCU) and potential new systems with NNP MT	The new NNP MT 'extended' system to respond to nutrition management as well as evaluation and research[102] requirements and should also provide information for 'accountability needs'
Ownership and responsibility for the final NNP MT should correspond to accountabilities	FMoH/RHBs are overall responsible for coordinated nutrition management while EPHI are responsible for coordinating research and evaluations	
As undernutrition will serve as a key 'impact' indicator, program implementation monitoring and accountability will require 'process' and outcome indicators, including coverage	"outcome monitoring" important for management of complex processes[103]	'Stunting' as an outcome/biomarker should be complemented with indicators reflecting child's progress during the '1000 days' key stages
Likewise, effective nutrition management will need 'real time' information for prompt actions	Use of e.g. 'rapidSMS' and similar technologies where/when feasible and appropriate	
Current draft NNP MT is focused on national and regional levels with the *woreda* level acting primarily for data collection and	The NNP MT needs to be adapted and extended to allow for effective nutrition management at *kebele* as well	The NNP MT 'roll-out' will offer good opportunity to try out practical options for *kebele* level NMIS

[102] NNP 'research agenda', including data base, presently being finalized
[103] See Section 4.4.5 for explanation

input functions	as *woreda* levels	
Links to MIS of other NNP key sectors and activities	Multi-sectoral and integrated nutrition actions will require the disparate MIS in place to be compatible and 'talk to one another'	This is a huge task that will require both an effective strategic approach overall as well as government leadership with effective technical support and compliance from partners
The NNP MT will require 'computerization'	There is presently a gradual introduction and use of improved IT down to *woreda* level in Ethiopia	Computerization of HMIS and NNP MT (at least down to *woreda level)* will greatly enhance capacity for local analysis of nutrition developments and thereby actions to respond
Analysis and presentation of data for effective management and accountability purposes need to be adapted to the responsible users of the system	Indeed, a 'generic' problem for many MIS	Already several promising approaches being proposed, e.g. 'dash-boards', 'score cards', etc. Need to be completed, adopted and rolled-out

4 .4: Common Themes and Summary Recommendations from the Policy and Program Gap and Opportunity Analysis

4.4.1: Policies and Programs in 'Transformation'

In the policy and program areas reviewed in Section 4, it is strikingly clear that in all relevant nutrition-related areas of government policies and programs there are very fundamental transformations and developments that have taken place during the last decade. Moreover – in virtually all of these areas – these transformations and developments are in a process of accelerating further rather than consolidating!

The implications are that, instead of reviewing existing policies, programs and implementation structures as 'given', there is a need to view all of these as entities in change where considerable nutrition impact could conceivably materialize by proactively engage in these processes and ensure that nutrition considerations and outcomes are included wherever possible.

The pace and nature of these processes – especially as they apply to development of operational capacities – differ greatly between the different locations and socio-economic settings across Ethiopia. This makes the task of 'participatory nutrition programming' more complicated and demanding and will require human resources. These human resources need to be identified and mobilized within Ethiopia.

What external support partners can do is to support the process financially and by providing technical support when required.

4.4.2: Focus on Nutrition Sensitive Programs and Developments

Almost all policy and program areas reviewed in Section 4 are areas normally referred to as aspects of *nutrition sensitive development.* This means that actions and developments in these areas may or may not contribute positively to nutrition improvements depending on how the policies and programs are formulated and operationalized. In other words, programs in these areas do not automatically lead to nutrition improvements unless properly focused to address critical needs of the children and women nutritionally at risk. This will require a program design that responds to an analysis of the actual causes of malnutrition (see section 2). Such updated analysis will in turn guide the policy formulation in the respective area by defining clearly the specific role and responsibility this particular sector or 'area' need to play in order to eliminate malnutrition in different parts and population groups in the country. Most importantly, however, is to explicitly include nutrition outcome objectives and corresponding indicators in the program monitoring and evaluation frameworks.

Given the wide variety and differences across Ethiopia in terms of social, economic, environmental and cultural settings, it is critical that *nutrition sensitive* policy provisions and program approaches are sufficiently adapted to local conditions. This will require 1) *formative research* as a key component in the program formulation and 2) *operational/policy research* as part of program implementation, monitoring and evaluation.

4 .4.3: Focus on household and community level

Articulation and operationalization of nutrition sensitive programs require a focus on community and household levels! In every community there will be some 30-70% of the children who are malnourished while 70-30% are reasonably well nourished under seemingly the very same circumstances[104]. Understanding what makes the difference and how to prevent or mitigate nutritional risks is, therefore, most easy to do at the community level *provided* that sufficient capacity to *assess, analyze and act, i.e. Triple-A,* is available. The fact that so many children are developing reasonably well in seemingly difficult circumstances suggests that such capacities do exist, but these capacities are mostly ingrained in traditions and practices within the communities and among community change agents. Rarely – in a global perspective - is there a systematic *capacity development* process in place to build and enhance community (and district) level *Triple-A* capacity for nutrition improvements. In this aspect, Ethiopia is different due to the deliberate and successful GoE efforts to establish strong community, i.e. *kebele*, capacities in nutrition-related areas such as health, agriculture and DRM (Disaster Risk Management). The challenge and, indeed, the great opportunity will be to ensure that these strong human resources at community level are effectively organized and supported to address problems of malnutrition in their communities even better than before.

4.4.4: Capacity development

In addition to recognizing the need for *capacity* development at community level it is important to note that the shift towards stronger emphasis on *nutrition sensitive developments* will require strengthened local capacity for nutrition programming both *within sectors* (see sections 4.2) as well as for multi-sectoral

[104] This is sometimes referred to as 'positive deviance'

and multi-stakeholder management and coordination and nutrition governance, the latter often referred to as *functional capacities*[105]. .

It has already been concluded that Ethiopia has impressive capacity for nutrition work but it is also recognized that those capacities may need to be more evenly distributed and better utilized through training, supervision and support.

In addressing capacity development issues in the context of nutrition development, it may be useful to adopt the concept originally proposed by UNDP and later modified for use in a 'Human Rights Based Approach to Programming, HRBAP'[106]. This concept goes way beyond defining capacity only in terms of skills and knowledge and stresses that in order to hold any actor or institution accountable (e.g. for nutrition security) they have to have:

1. Been given and accepted clear responsibilities
2. Authority to act on issues related to this responsibility
3. Access to necessary resources to act (human, economic, organizational)
4. Management capacity (essentially to 'Triple-A', see below)
5. Access to information and capability to communicate (they need to be connected!)

In the Ethiopian context, there is presently considerable attention to capacity area 3, i.e. resources, but throughout the gap and opportunity analysis of policies and programs there are abundant examples where the other capacity requirements are not being met. For example, sectors are not assigned responsibilities, *kebele* committees are not authorized to use PSNP resources for nutritionally vulnerable (depending on e.g. assets), multisectoral coordinating committees do not have effective nutrition management capacity and access to actionable information and public nutrition education are major issues as observed in many contexts.

4.4.5: Embracing the complexity of nutrition developments in Ethiopia

We have already discussed that *nutrition in society is a complex issue* (see Section 4.3.3). There can hardly be any better example of this fact than Ethiopia. There are very few other countries with the same richness and diversity in terms of environment, culture, economies and social conditions translating into local diets, caring practices and health challenges. These local situations are presently in a state of rapid change as influenced by external and internal factors, including government policies and programs. Nutrition outcomes are the results of all these conditions and processes and, indeed, not easy to predict nor even to fully understand at hindsight as this SITAN exercise is demonstrating.

Managing complex challenges and developments, as emerging global consensus suggests, requires clear but flexible frameworks for action, institutional structures that are participatory and transparent but still action-oriented, and information systems that provide key decision-makers (up to community level) with *real-time* data for analysis and action. This is, indeed, the hallmarks of an effective nutrition *Triple-A approach*. Such an approach is already but partly in place in the Ethiopian NNP policy and program frameworks; what is needed is a more focused capacity development approach to 'fill the gaps' and

[105] SUN, UNICEF. Strengthening Effective Engagement to Scale Up Nutrition in Action. Workshop Report. Nairobi; Scaling Up Nutrition (SUN), United Nations Children's Fund (UNICEF): 2015. http://scalingupnutrition.org/wp-content/uploads/2015/06/150724-SMS-Functional-Capacity-Workshop-Kenya-June-2015-without-emails-for-website.pdf.

[106] Jonsson U. Human Rights Approach to Development Programming. Nairobi; UNICEF: 2003. http://www.unicef.org/rightsresults/files/HRBDP_Urban_Jonsson_April_2003.pdf

ensure that the iterative assessment, analysis, action cycles are ‘closed’, i.e. never allowed to stop but constantly leading forward and encompassing new developments and opportunities as they arise and, very importantly, establishing a platform for common learning in the process.

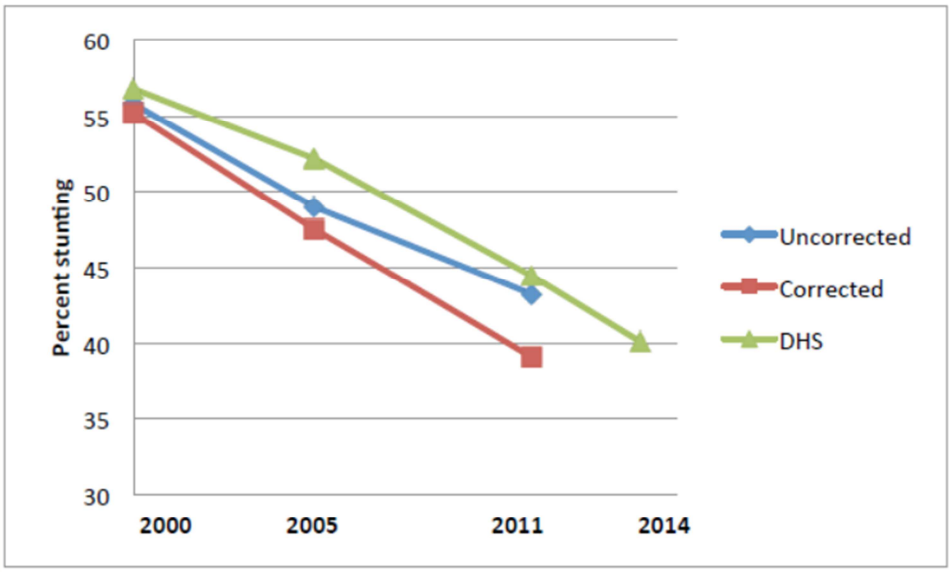
Section 5 Summary of Findings and Recommendations

General Trends and Differentials in Under-nutrition

Ethiopia has historically been seen as a global basket-case of hunger and under-nutrition and as late as 2002-2003 the country experienced its largest ever drought emergency with over 13 million people in need of direct food assistance. A decade later, the situation has dramatically changed to the better. This report attempts to shed light on what has happened and make recommendations on how the situation can be further improved.

Figure 5.1 copied from **Tulane Complementary Analytical Report:**

Figure 2.7 Trends in stunting prevalences (<-2SDs HAZ) in children 0-5 years, 2000-05-11, national level.



Source: calculated from cleaned DHS data (2000, 2005, and 2011).
DHS is DHS results as published. Uncorrected is our estimates after cleaning data except for adjusting for lying/standing measurement issue. Corrected removes those cases incorrectly measured lying or standing (see Methods section).

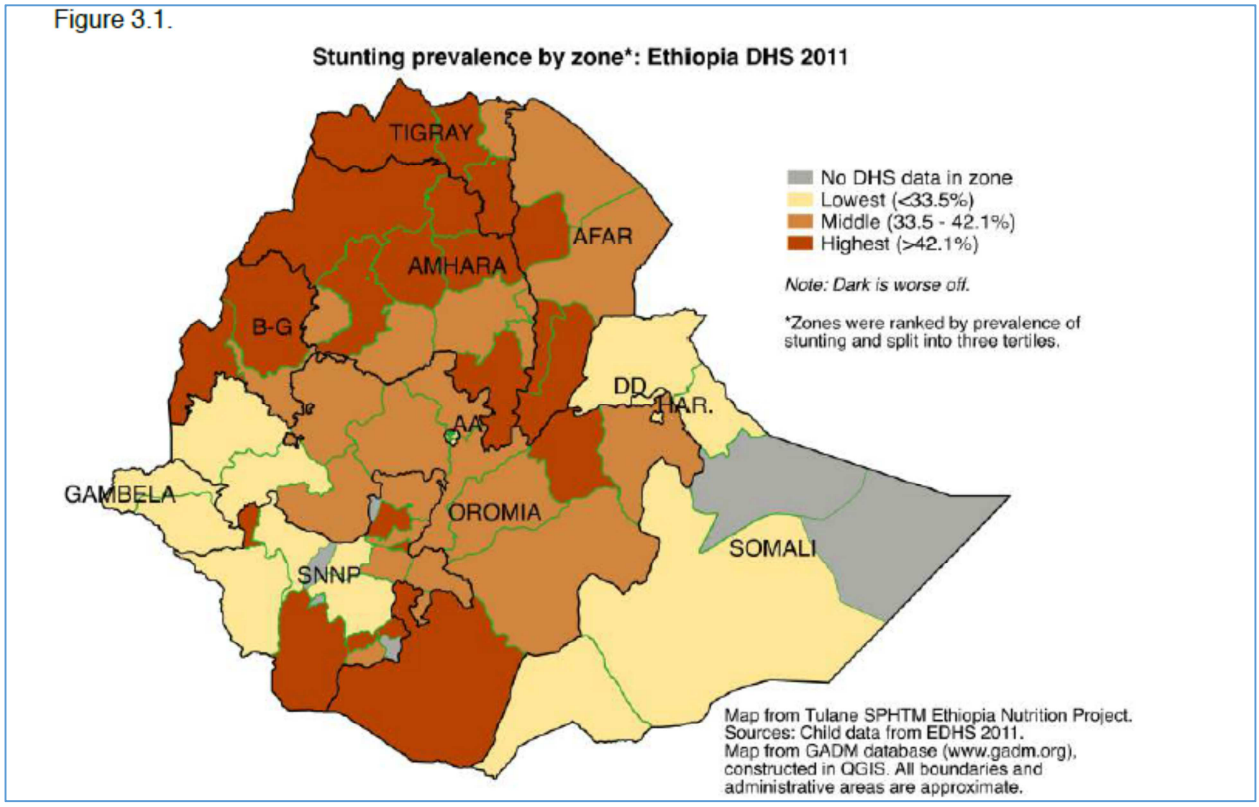
The figure above shows how stunting levels (corrected for measurement and age coding errors) have decreased in Ethiopia during the 2000-2014 time period. The declining rate seems to continue through the 2014 'mini-DHS' but caution is raised regarding these data as explained in detail in the **Tulane Complementary Analytical Report**, Methods section. The steady improvements in stunting are similar to

those found in other countries with a history of success in elimination of under-nutrition over sustained periods[107].

The question was raised to the SITAN team why the stunting reduction rate seems much slower than other development indicators in Ethiopia at present – like GDP/capita and child mortality. However, as explained in Section 2, the extended time. i.e. 1000 days (appr. 3 years) it takes for stunting to evolve in each child and the fact that stunting is measured as the average of all children below 5 years of age means that changes in stunting levels will take comparatively longer time to show up. As it is, the stunting reduction rate in Ethiopia during the last decade has shown a very consistent and satisfactory pattern.

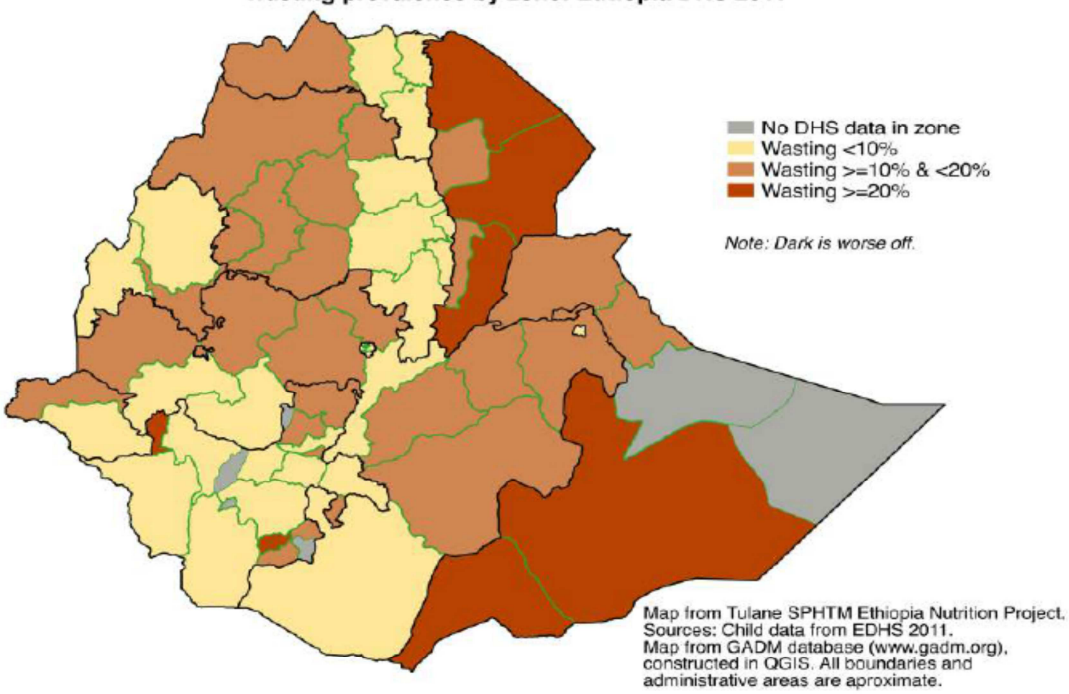
Figures 5.2 a and b show maps of undernutrition prevalence in different parts (zones) of Ethiopia in 2011 using stunting (height/age) and wasting (weight/height), respectively, as indicators.

Figure 5.2 a and b (copied from Tulane Complementary Analytical Report)



[107] IFPRI. Global Nutrition Report. Actions and Accountability to Advance Nutrition & Sustainable Development. Washington, D.C.; International Food Policy Research Institute: 2014 & 2015.

Figure 3.3.



There are evidently large differences in undernutrition across the different parts of Ethiopia with stunting (chronic undernutrition) being most concentrated in the north and north-west and then following a broad band through the middle of the country to the south. Wasting (acute undernutrition) on the other hand is highest in the pastoral areas, particularly in Somali and Affar regional states.

What is interesting is that despite these regional differences, the rate of stunting improvements has progressed at somehow similar rates in all of the regional states of Ethiopia as shown in figure 5.2.

Furthermore, the point of similar rates of stunting improvements is also reflected in families with different levels of poverty as shown by the **Tulane Complementary Analytical Report** through an in-depth analysis of how stunting has changed from 2000-2011 as related to critical household 'assets' (access to improved water source, ownership of latrine and improved roofing material) as shown in Figure 5.4.

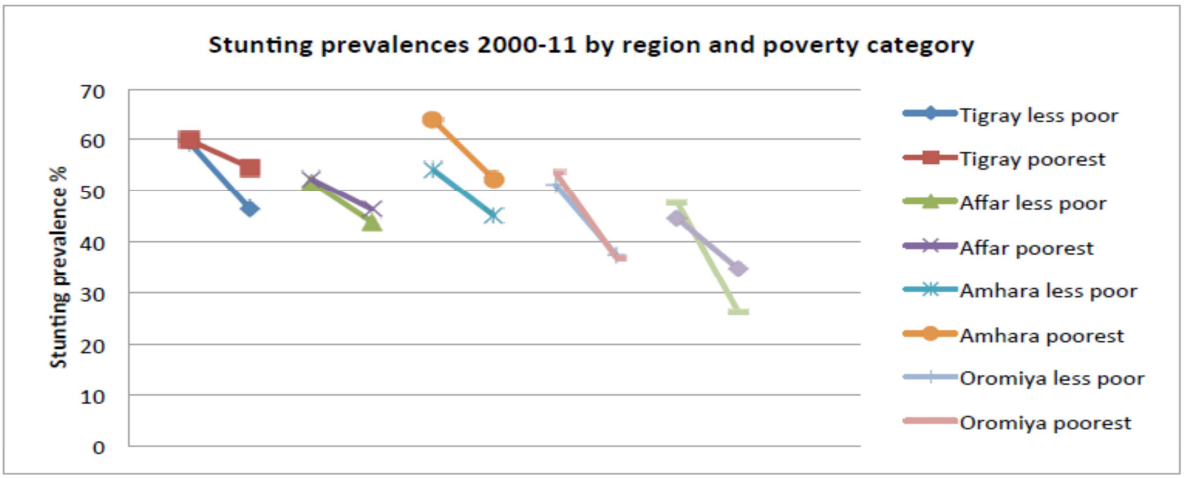
The same analytical approach and presentation was also applied to mother's education as presented in Figure 5.5. What both of these graphs show is that stunting levels have improved at the same rate in families without any of those assets as in families with one or several of these assets, and in families with mothers without any education compared to families with mothers with some education.

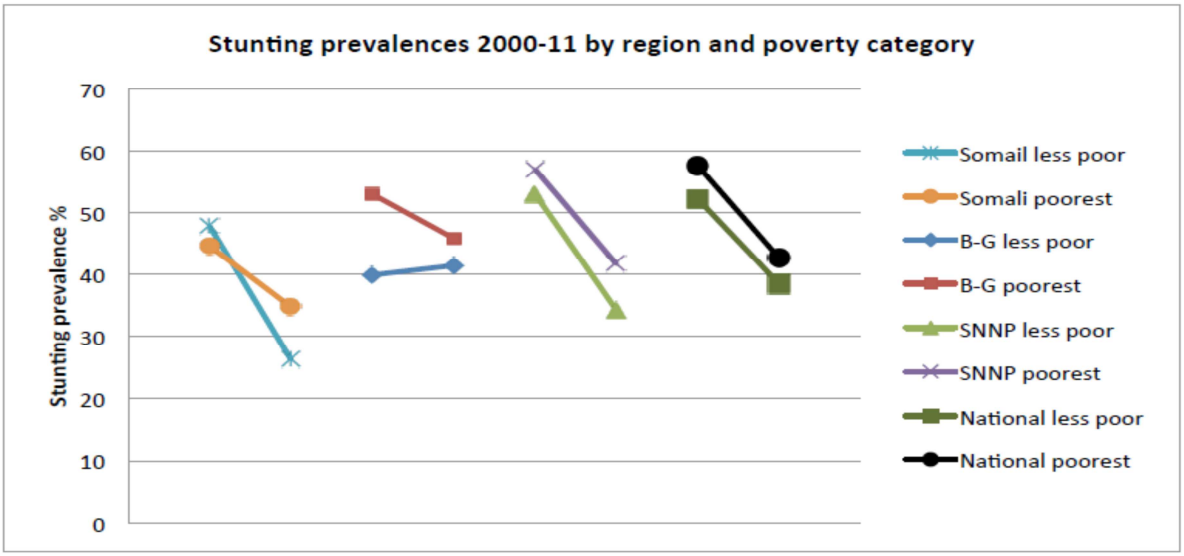
The graphs also show that the proportion of the population in the 'non-asset' and 'non-education' groups have decreased very significantly in Ethiopia during 2000-2011. We believe this is evidence of successful

pro-poor and pro-equity policies[108] and that these policies are key drivers of nutrition improvements in Ethiopia during the last decade.

Figure 5.2: stunting reduction patterns 2000-2011 across the regions and poverty categories

Figure 2.23 Stunting prevalence trends 2000-11 by region and poverty category (zero-assets vs some assets).





[108] The conclusion of strong pro-poor and pro-equity policies and development in Ethiopia during the first decade of the new millennium is consistent with the findings of the World Bank 2011 Ethiopia Povery Report

Figure 5.3: Relationships between asset poverty and stunting (**Tulane Complementary Analytical Report)**

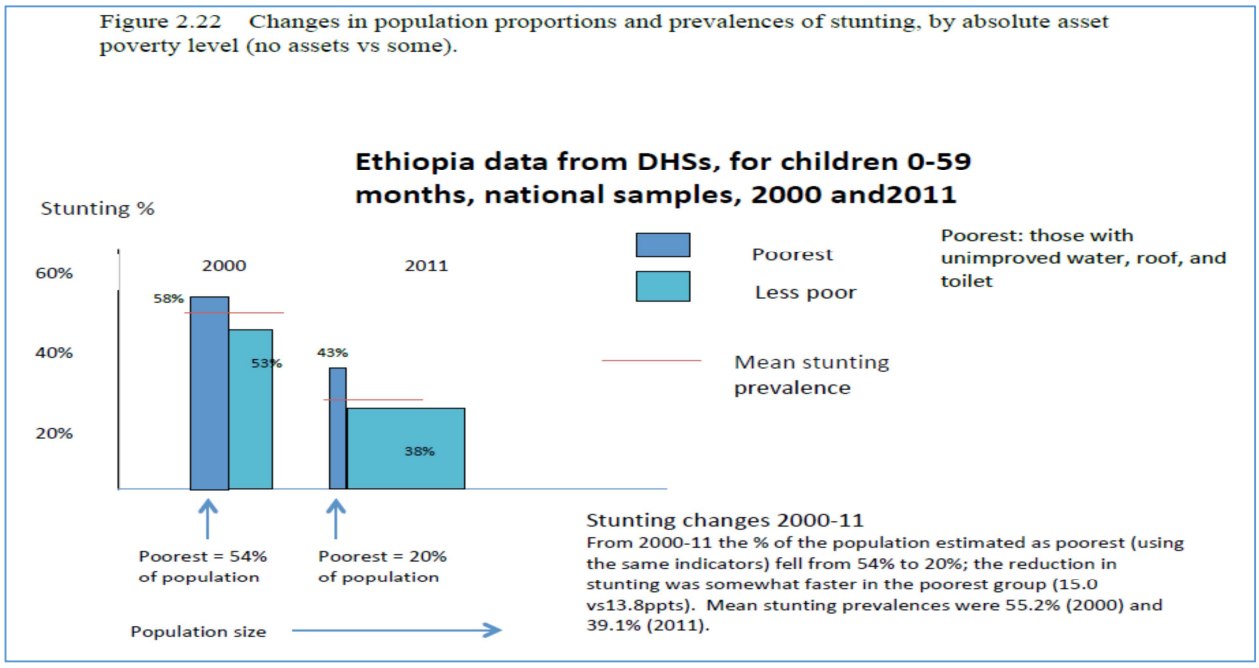
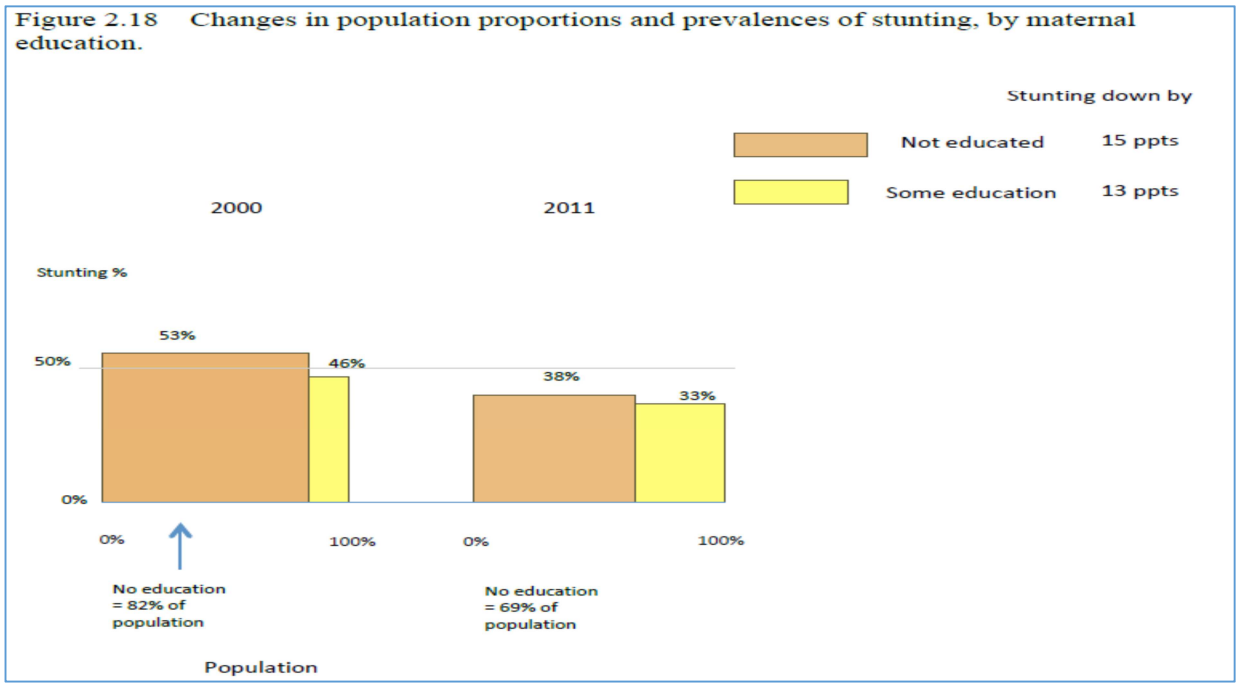


Figure 5.4: Relationships between mother's education and stunting (**Tulane Complementary Analytical Report)**



Basic and Underlying Causes of Undernutrition in Ethiopia

So which have been the main 'drivers' of nutrition improvements in Ethiopia during the last decade and which are, indeed, the major causes of malnutrition at present?

Poverty, education, gender equality, political stability and 'pro-poor' policies are usually factors which correlate strongly with positive nutrition developments in a global perspective[109] and similar associations can be found in Ethiopia from reports of correlational analysis at aggregate level as reviewed in Section 1. These type of factors are normally referred to as 'basic causes' of malnutrition in the conceptual framework of causality employed in the present study (cf. Section 2).

What is somewhat surprising is that these factors do not show stronger (!) association with stunting improvements than reported; e.g. Headey found that these factors only explained only around 15% of differences in stunting patterns[110]. One possible explanation is that policies, programs and developments relating to these 'basic causes' in Ethiopia have, indeed, been benefitting the population fairly equitably which makes it difficult, for comparisons, to find groups 'left behind' with unchanged or increased levels of undernutrition.

Instead of (again!) repeating the same type of correlational analysis, the **Tulane group**, as part of this SITAN exercise, undertook to probe more thoroughly into a number of these 'apparent' associations by using a more robust methodology (see **Tulane Complementary Analytical Report, Methods**)

The following is a summary of our results and observations in relation to key basic causes as interpreted from a policy and program perspective:

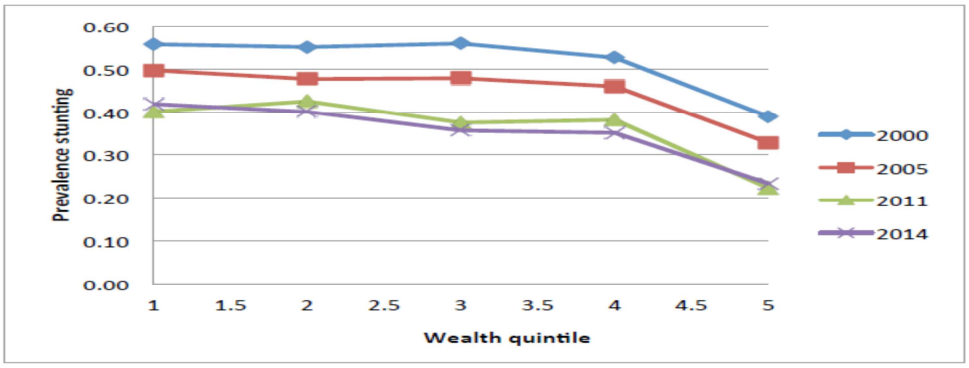
1. *Poverty.* As in most other countries, in Ethiopia there is an association between 'poverty indicators' and stunting. The DHS 2000, 2005, 2011 and 2014 all show lower levels of stunting in the highest wealth quintile but what is interesting is that there is rather little difference in stunting levels comparing the 4 lowest quintiles and this pattern has remained rather similar during the last decade. Hence, Figure 5.5 is consistent with Figures 5.3 and 5.4 showing that decreases in stunting rates are rather similar across all the wealth quintals although it is understood that these wealth quintiles are, indeed, relative and, hence, subject to change (the families in each of the wealth quintiles are not the same ones in each of the DHS samples).

Figure 5.5: Prevalence of stunting by wealth quintiles (from **Tulane Complementary Analytical Report)**

[109] IFPRI. Global Nutrition Report. Actions and Accountability to Advance Nutrition & Sustainable Development. Washington, D.C.; International Food Policy Research Institute: 2015.

[110] Headey D. An analysis of trends and determinants of child undernutrition in Ethiopia, 2000-2011. ESSP II Working Paper 70. Washington, D.C. and Addis Ababa, Ethiopia: International Food Policy Research Institute (IFPRI) and Ethiopian Development Research Institute (EDRI): 2014.
http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/128896

Figure 2.19 Prevalences of stunting by household's wealth quintile, 2000, -5, -11, -14 .



Note: wealth quintiles are calculated separately for each survey, from assets; the absolute wealth (or poverty) level in each quintile has generally improved within quintile over time, i.e. for example the 2011 quintile 1 is less asset poor than the 2000 quintile 1.

The World Bank 'Poverty assessment report'[111] suggests that the largest improvements in poverty reduction in Ethiopia at that stage (end 2014) were in urban areas and in areas with easy access to urban markets and income opportunities. The urban and peri-urban population groups are also most likely to invest in household assets like roofing and latrines and would have better access to education. These facts make our observation of equal rates of stunting reduction (Figure 5.3 and 5.4) in extreme asset poverty and in mothers with no education even more remarkable, i.e. that households outside the zones of more rapidly decreasing poverty rates and asset acquisitions were able to achieve the same rates of stunting reductions as those in more favorable situations! A possible explanation for this is that other important programs and developments benefitted the population inside and outside the 'economic development zones' fairly equally. These developments and programs are likely to include: basic education, women's empowerment (or, rather, removal of subordination of women), access to basic health services and 'pro-poor' programs focusing primarily on support to households with food insecurity (like PSNP).

2. *Basic education.* As noted in section 4.2.5, the coverage of basic/primary level education in Ethiopia has been truly impressive and included the whole country. There are still serious issues of quality – especially in remote and disadvantaged areas – but the education reforms have certainly reached the whole country. It is somewhat surprising that there seem to be little difference in stunting levels of children with educated and non-educated mothers and that nutrition improvements are similar in children with mothers with some compared to no education (Figure 5.4). The explanation may be that all mothers benefitted equally from improved health services and informal nutrition education but the issue would warrant more in-depth study. Of additional critical importance are the linkages between basic education and water in relation to stunting outcomes as presented under the *water* heading below

[111] World Bank Group. Ethiopia Poverty Assessment 2014. Washington D.C., World Bank: 2015. https://openknowledge.worldbank.org/handle/10986/21323

3. *Women's empowerment.* The dramatic improvements in girls' education is a core part of the 'women's empowerment revolution' in Ethiopia during 2000-2011, a process that is continuing! Oppressive practices like early marriage, 'marriage by abduction' and female genital mutilation which were rampant up to 10 years ago are all in the process of being abandoned. Women's access to reproductive health services, including family planning, ante-natal, peri-natal and post-natal care (including safe deliveries) have improved and are continuing to improve everywhere (cf. health services below) and women's participation in projects, programs and policy processes are improving day-by-day across the whole country and at all levels from the Women Development Army at community level to the regional and federal Parliaments.

   Against this background, it is a bit surprising to note that the nutritional status of the women of reproductive age (in the mothers of the children sampled in the DHS surveys 2000 and 2011) showed very marginal improvements in nutritional status measured as Body Mass Index ("thinness") and anemia, and that comparatively little evidence of associations were found between 'maternal factors' (e.g. age) and the nutritional status of the children We can only conclude that absence of statistical correlational evidence in the 2011 DHS sample, does not necessarily imply absence of such causal relationships and that this is a matter that require further study. What is clear, however, is that the issue of maternal nutrition needs stronger emphasis in the further acceleration of nutrition work in Ethiopia.

4. *Access to health services.* As discussed in Section 4.2.1 the build-up and roll-out of the health services system in Ethiopia during the last decade is an accomplishment that is receiving global recognition and praise. The Health Extension Program is at the core of this system and the (soon to be completed) process of complementing the original Health Extension Workers' Program with a fully covering and functional system of Health Centers plus the community-based system of the Women Development Army will surely make the HEP even more effective in the future. The challenge (see 4.2.1) is to ensure that nutrition continue to be a high priority area in the improved Health Extension Program. Of particular importance will be to ensure that the new emphasis on strengthened reproductive health services – including institutional deliveries – will help to address issues of maternal nutrition which has hitherto been weak.
   From the perspective of understanding the 'equitable' stunting reduction in Ethiopia during the last decade, an important observation is that the building up of the HEP has benefitted all areas and parts of Ethiopia; in some places, e.g. pastoralist communities, there have been initial problems of finding suitable, female HEW candidates but this is presently being rectified as more girls are completing their education and, hence, fulfilling the basic requirements to be trained as HEW.

5. *Productive Safety Nets Program, PSNP, and other 'Pro*-poor programs'. As noted in Sections 4.2.3 and 4.3.1 reviewing social protection/PSNP and disaster risk management programs, respectively, the GoE with good support from partners have been very successful during the last decade in protecting population groups and individual households and children vulnerable to shocks – in particular drought-related food insecurity. Even at present these programs seem to be remarkably effective in keeping poor and vulnerable groups alive while the social and economic

transformation processes – hopefully and incrementally – will offer them more secure livelihoods in the future.

Again, we note from the perspective of broad and comparatively equitable nutrition improvements that these programs appear to have, indeed, managed to reach marginalized communities and households remarkably well thereby protecting the nutritionally vulnerable almost everywhere. An assessment of the nutrition impact of the PSNP[112] failed to demonstrate nutritional impact of the program on the beneficiaries but we believe this is a result of the fact that PSNP so far has not sufficiently addressed prevention of food insecurity nor addressed the 'non-food' determinants of undernutrition and we believe the new, *nutrition sensitive* PSNP4, will become more successful in that respect.

6. *Water, Sanitation and Hygiene.* Regarding sanitation and hygiene there is a similar story as for the five topics above, namely that there have, indeed, been very significant improvement across the whole country in terms of sanitation facilities (latrines) and hygiene practices although there is still room for improvements (cf. 4.2.4). Globally, there is at present great attention to the linkages between fecal exposure ('open defecation free' communities) and stunting[113] and a few of the reported correlational analysis studies from Ethiopia[114] suggest that there is, indeed, a statistical association between these factors. The **Tulane Complementary Analytical Report,** interestingly finds a significant correlation between sanitation and stunting but only in children below 24 months of age while there is stronger correlation between stunting and access to improved water source in children above 24 months of age. The association between water and stunting is also dependent on type of water source where a village standpipe or piped water systems show significant correlations whereas water wells and other non-improved water sources fail to demonstrate such correlations. A more detailed discussion around the relationship between stunting and access to water and sanitation can be found in the **Tulane Complementary Analytical Report p.45 ff.**

   The statistical association of access to potable water and stunting is strongly corroborated by our observations during the field visits (see Supplementary Materials[115]) where virtually everywhere mothers were identifying access to water as their major constraint to following nutrition advice on child care in general and child feeding in particular. Ranging from the stony highlands of northern Amhara to the dry lowlands in Affar, the sandy Rift Valley and even in the hilly parts of SNNPR, women have to spend an inordinate amount of time fetching water and being away from their children.

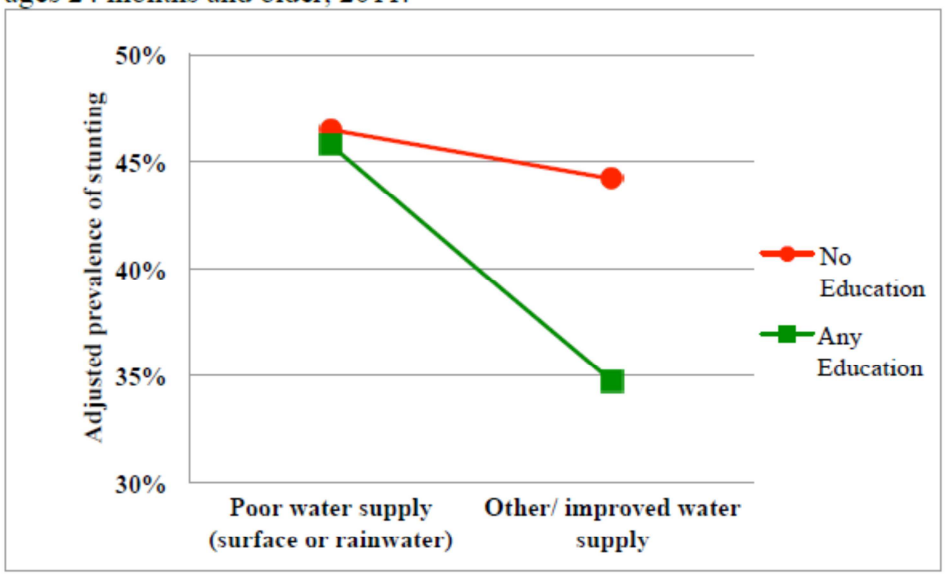
   Further correlational analysis of water and stunting in relation to other factors revealed a surprisingly strong influence of mothers' education in relation to the impact of improved water source on stunting outcomes where our data suggest that combining improved water source and

[112] Hoddinott J, Berhane G and Kumar N. The Productive Safety Net Programme and the nutritional status of pre-school children in Ethiopia. *Unpublished*. Addis Ababa, Ethiopia: 2014.
[113] Humphrey JH. Child undernutrition, tropical enteropathy, toilets and handwashing. *Lancet* 2009; 374: 1032-35.
[114] Headey D. Nutrition in Ethiopia: An emerging success story. 'Together for Nutrition'. Addis Ababa, IFPRI: 2015.
[115] SITAN supplementary materials available through UNICEF, Ethiopia and Tulane University

maternal education could lead to a reduction of stunting rates with 10 percentage points, Figure 5.6.

Figure 5.6: Relationship between access to improved water supply, mother's education and stunting (copied from Tulane Complementary Analytical Report)

Figure 2.45 Interaction: Adjusted prevalence of stunting by water source and education ages 24 months and older, 2011.

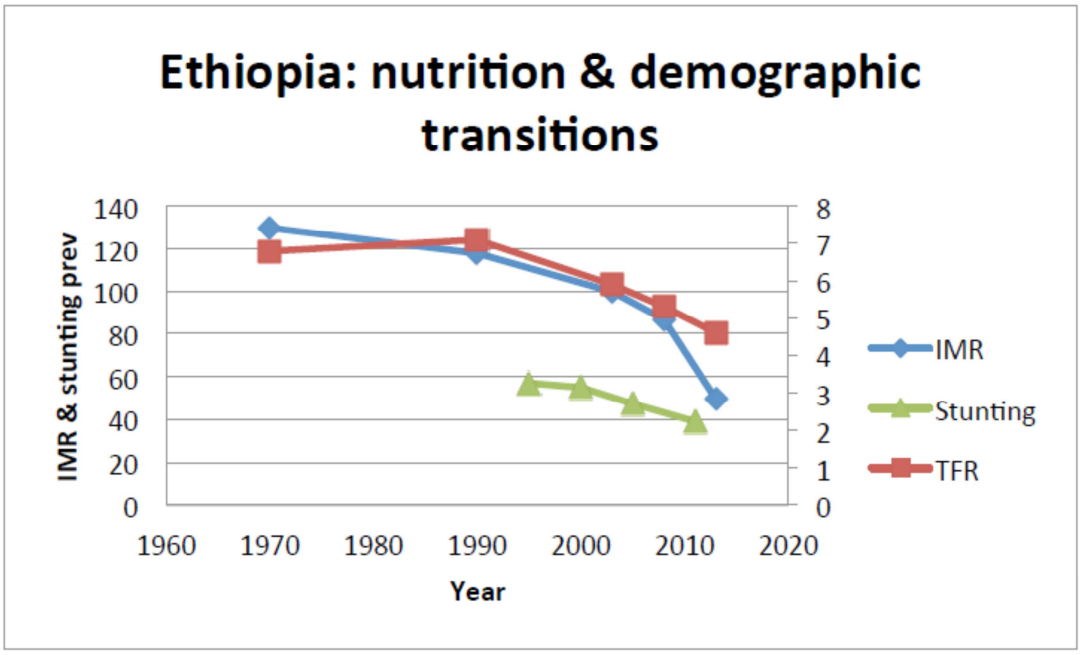


Mgood=1, un-weighted. See table 2.20 for data points.
Note: Mean adjusted for: child's age in months=43.48, child's gender=1.47, no toilet=0.51, poor roof=0.50, and mother's height in cm=157.6569.

Despite good progress in improving access to safe water in Ethiopia almost half of the population is still not covered and our data suggest that this may, indeed, be an area which require significantly more attention in order to accelerate stunting reduction in Ethiopia.

7. In addition to the above mentioned factors at underlying and basic levels of causality of malnutrition in Ethiopia, we need to take note of the interesting observation in the Tulane Complementary Analytical Report pp. 41 regarding the likely impact of demographic change on undernutrition in Ethiopia. The authors note (see figure below) that Ethiopia has now reached a stage in the demographic transition process where reductions in infant mortality rates, IMR, are starting to cause a significantly reduction in total fertility rates, TFR, and, as a result, there is a concomitant reduction of stunting levels (through combined effects on maternal health and nutrition, household resource/family members, etc.). The authors predict that if this trend is sustained it will lead to very low levels of stunting by 2030 and beyond.

Figure 2.39 Trends in stunting, IMR, and total fertility rate (TFR), 1970 – 2015.



Sources: UNICEF SOWCs; DHS.

Immediate Causes of Malnutrition in Ethiopia

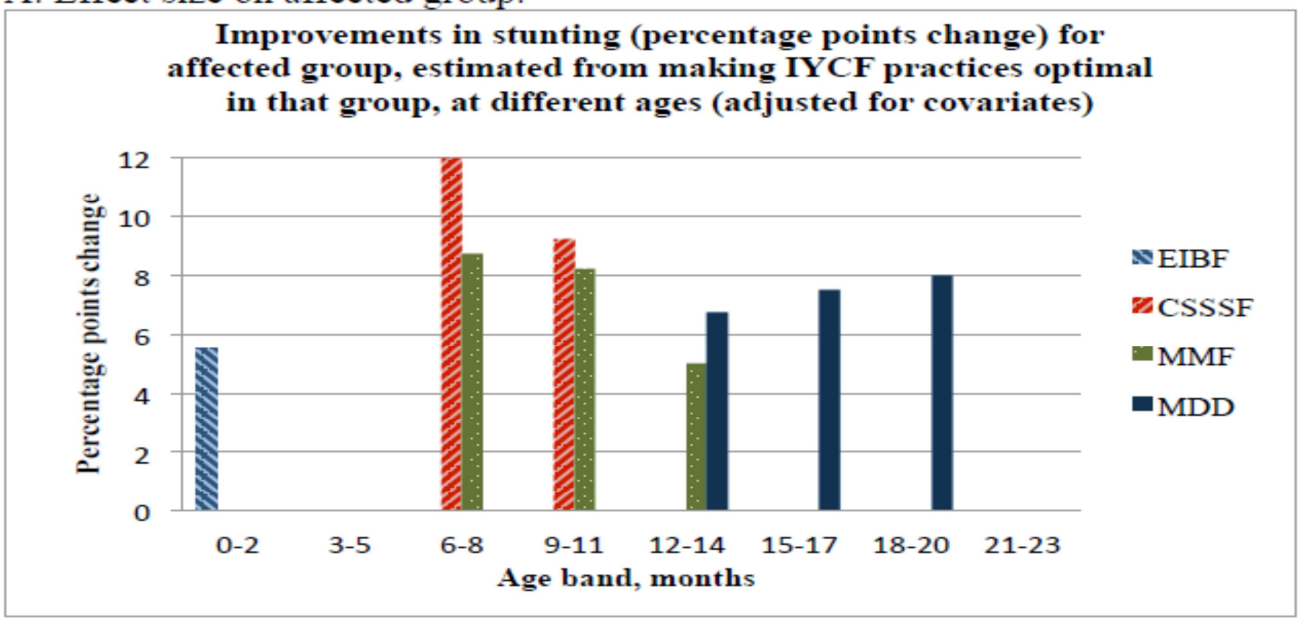
Most of our attention at the level of immediate causes (cf, Section 2)) was focused on 'adequacy of dietary intake' based on consistent observations of poor Infant and Young Child Feeding, IYCF, practices with e.g. the DHS 2011 reporting a dismal 4% of Ethiopian children were receiving adequate complementary feeding.

Analyzing the DHS data sets in more detail by disaggregating the complementary feeding indicators into shorter age bands among the children 0-24 months of age and comparing with stunting levels, the **Tulane Group** (Tulane Complementary Analytical report p.58 ff) were able to make some observations that we believe are of great practical importance in the continued work to improve IYCF in Ethiopia (see Figure 5.6)

Figure 5.6 (copied from the Tulane Complementary Analytical Report)

Figure 2.56 Effect of improving IYCF practices at different ages.

A. Effect size on affected group.



The figure shows:

1. Early initiation of breast-feeding affects stunting only among the newborn (and the effect is later disappearing)
2. Introduction of solid, semi-solid and soft foods improves stunting rates in children 6-11 months
3. Minimum meal frequency is very important in the age groups 6-14 months (declining impact) but then disappears as the child gets used to complementary feeding
4. Minimum diet diversity emerges as a very important determinant of stunting levels 12-24 months

Note: it was not possible to assess impact of *exclusive breast-feeding* 0-6 months as most infants in Ethiopia are (exclusively) breast-fed according to size rather than age, i.e. bigger children are given extra food.

The findings in the figure above should lead to more age-aligned and -adapted IYCF messages for children 0-24 months thereby we believe, leading to more effective Social and Behavioral Change Communication, SBCC.

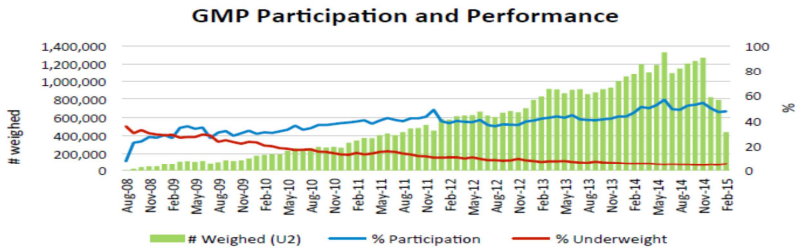
Probably the most encouraging evidence of a successful *nutrition specific intervention* in Ethiopia is the outcome of reduced underweight in children participating in the community-based nutrition, CBN, program with growth monitoring and promotion, GMP, as a key component. The results from the 'pilot

phase' of the CBN were carefully evaluated[116] but despite the positive results, there was a reluctance to scaling-up of the program in its original design due to the fact that the program had trained and put in place Community Health Volunteers which created a specialized, 'extra', cadre of community workers which was not in line with the basic principles of the Health Extension Program.

In the meantime, the CBN and GMP program approach has been further expanded and with continued very promising results (see figure on p. 59 copied below for easy reference). While the number of children participating in the CBN/GMP activities are steadily increasing, the proportion of underweight children (w/a<2 SD.) is steadily improving to levels below 10%.

Ethiopia Nutrition Analysis (July 2015)

Figure 1.2 Reduction in child malnutrition (underweight) and increased participation in CBN, 2008-15.



Source: UNICEF nutrition database

The issue is obviously whether the most at risk children are participating in the GMP or not (this issue was clearly noted also in the CBN evaluation referred to above) but, as noted, with the increased community coverage capacity provided by the Women Development Army, the possibility to achieve (close to) full participation is certainly within reach. The fact that the federal Ministry of Health is, indeed, (October 2015) in the process of adopting a 'National Community Based Nutrition Protocol' which adopts GMP as one of the standard nutrition activities within the HEP augurs for an accelerated scale-up of this promising approach. Yet another positive development is the additional funding (from CIFF) to support this CBN/GMP scaling-up.

As an alternative to the CBN Community (GMP) Volunteers, the Women Development Army is being established as a more streamlined and multi-purpose cadre of community health volunteers and the challenge is now to put in place a sensible division of responsibilities and work between the Health Extension Workers and the Women Development Army volunteers to ensure that all children below 2 years of age are regularly weighed and their caretakers properly counselled regarding growth promotion as needed. The author was witness to several good examples where such local collaboration between

[116] White JM and Mason JB. Assessing the impact on child nutrition of the Ethiopia Community-based Nutrition Program. Report to UNICEF of an evaluation study. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2012.

HEWs and WDA had been effectively established and is convinced that GMP, using weight monitoring should, indeed, be pursued at scale as a means to ensure local proactive responses to faltering child growth during the critical 0-24 months' age interval.

It is further noted that Vitamin A Capsule distribution and de-worming, two other quintessential *nutrition sensitive* interventions, have been implemented with incrementally higher coverage in Ethiopia since 2005-2006. Based on internationally established evidence and guidelines[117], these interventions are likely to have contributed to the nutritional improvements in Ethiopia during the last decade but it was not possible to statistically assess the impact of these interventions during this SITAN exercise. Both of these interventions are presently in the process of being 'mainstreamed' into the enhanced Health Extension Program, HEP. It should be emphasized that 'blanket' Vitamin A Capsule distribution is really intended as a stopgap measure in situations of high levels of Vitamin A deficiencies and should be phased out as the situation improves or as alternative prevention strategies, e.g. Vitamin A fortification of cooking oils, are put in place. We believe a careful review of the Vitamin A deficiency situation and control measures should be carried out as the results of the national micro-nutrient survey become available. The same applies to issues around Iron deficiency anemia and corresponding measures to control (including de-worming).

Regarding disease patterns and their relationship to undernutrition, the DHS data set is not ideal and nor was it possible to use the HMIS data sets for analysis. What we did note was that some of the most 'notorious' disease factors affecting nutrition status had been contained rather effectively in Ethiopia during the last decade:

a. Measles which was the No 1 killer during the 2000-2001 Horn of Africa emergency was subject to a mass campaign (also including Vitamin A capsule supplementation) reaching 30 million children below 15 years of age during 2002 and successfully prevented a repeat of high measles fatality during the 2003 drought emergency. Measles routine immunization (combined with occasional NIDs) have subsequently kept measles morbidity and mortality at very low levels.
b. Malaria (in Ethiopia malaria is primarily epidemic) emerged as the major child killer disease starting from 2002-2003 and was then subject to one of the most successful malaria control efforts ever with over 20 million ITN distributed and HEW effectively conducting malaria diagnosis and treatments. Malaria incidence and fatality was dramatically reduced and is still kept at very low rates
c. Pneumonia subsequently emerged as the No 1 cause of death in children but is presently being brought under control as HEW are given permission to administer antibiotic treatment.
d. Diarrheal diseases presently appear to be the most important child disease factor related to both child mortality and undernutrition. The DHS 2011 indicator on 'recent diarrhea episode' is quite high (around 25%) by international comparisons. This is an important factor to take note of in acceleration of stunting reductions and should become an integral part of our proposed strong WASH-Nutrition joint programming initiatives.

[117] WHO. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Geneva; World Health Organization (WHO): 2013.

We should also note that the ongoing efforts to improve reproductive health – including institutional deliveries and better ante-natal, peri-natal and post-natal care – should give increased opportunity to address maternal health and nutrition issues in general.

Management of the National Nutrition Program Process

The National Nutrition Programme, NNP, has a well-articulated 'Programme Implementation Manual'[118], PIM, which defines roles and responsibilities of the key actors (government agencies and institutions) and establishes the management and coordinating mechanisms required. This PIM stipulates that multi-sectoral coordinating mechanisms should be in place at *national, regional and woreda (district)* levels. The PIM further proposes that these coordinating mechanism be divided into two committees: one 'coordinating body' with overall coordinating mandate comprising of higher level government representatives for each of the nutrition-relevant government sectors at this administrative level (ministries, regional bureaus, *woreda* department) and one 'technical working group' comprising technical staff from these government sectors together with invited partner organizations. The Technical Working group will provide a space for important, but sometimes lengthy, technical discussions leading to recommendations that are passed on to the 'coordinating body' for formal decision. The Technical Working Groups will also serve as a forum for multi-stakeholder coordination as representatives from partners with nutrition-related operations at each of these administrative levels are invited to participate.

This functional arrangement of synchronized 'coordinating bodies' and 'technical working groups' seems to present a lot of advantages and is emulated and considered by other countries that have joined the global Scaling-Up Nutrition movement. A minor but important observation by the SITAN team is that the role of the national level 'technical working group' presently seems to be assumed by the (OECD/DAC) Development Partners Group as it has been in place for over a decade. This may appear a practical arrangement but, unfortunately, has the disadvantage of not having the government as the convener. For the NNP Technical Working Groups at regional level and (presently being put in place) at *woreda* level, the government is the convener, occasionally with a partner organization providing secretariat assistance.

The national 'roll-out' of the NNP management and coordinating mechanisms has recently reached the *woreda* level and the SITAN team had opportunity to meet several newly trained *woreda* level functionaries who were all excited and keen to assume their new roles as nutrition managers. A common comment, however, was that they feel that the training received, albeit very well conducted, needs to be followed up with refresher training and on-the-job further training and experience-sharing as they felt that the issues are, indeed, rather complicated and complex.

Different aspects of multi-sectoral coordination mechanisms are discussed in more detail in Section 4.3.3, and a strong argument is made to formally extend these mechanisms to the *kebele* level! This is the administrative level closest to the communities where direct links can be established between assessment and understanding of local nutritional problems and actions to contain such problems.

[118] FDRE. National Nutrition Programme. Programme Implementation Manual. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia: 2008.

Having stated this, it immediately becomes clear that such community-based coordinating mechanisms are, indeed, already in place in many *kebeles* across Ethiopia and especially so in 'food insecure' areas. There are no nutrition committees as such but other committees such as 'food security committees', 'command posts' etc. are used to address nutrition problems as and when identified within the communities. Strengthening of *woreda* level nutrition management and coordination should, as much as possible, build upon such existing structures and ongoing work.

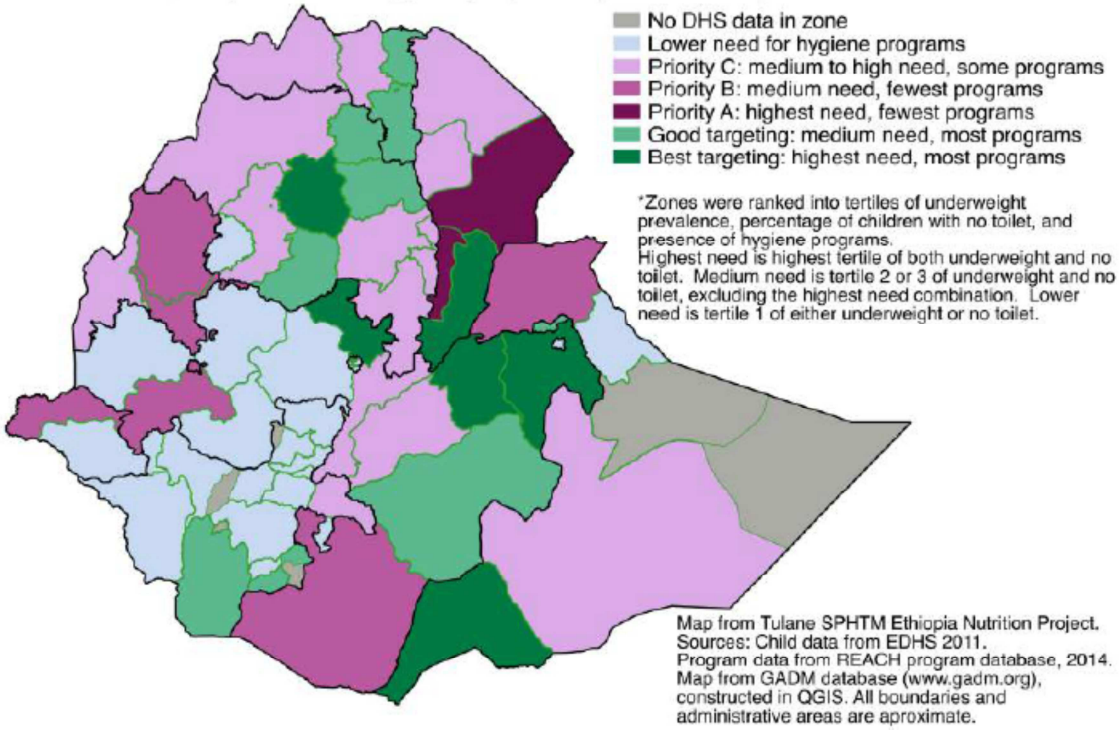
The need to ensure harmonization and integration of the newly formed NNP nutrition coordinating mechanisms also applies to emergency/DRM coordinating committees at other levels (including nutrition emergency clusters) and to other inter-sectoral coordinating mechanisms such as WASH committees as discussed in sections 4.2.4, 4.3.1 and 4.3.3.

Multi-sectoral nutrition coordination does require multi-sectoral nutrition management information systems, NMIS. As discussed in Section 4.3.4, there are already a multitude of nutrition information systems being used in Ethiopia at present and there is an urgent need to both harmonize existing systems as well as to ensure that the NNP management and coordinating mechanisms as well as key individual nutrition managers are receiving timely and accurate information to allow them to make the right decisions and to enhance accountability of the whole NNP effort. It is noted that different efforts in this direction is taking place, especially the development of the *NNP Monitoring Tool.* These efforts should be accelerated and it is also strongly emphasized that the nutrition management information systems need to be extended and firmly established at the community/*kebele* level. The nutrition workers in the community should not only collect nutrition information to transmit to higher administrative levels but must be able to use this information, themselves, in order to take immediate actions to alleviate emerging nutrition problems in their own communities.

The SITAN exercise (as part of the Tulane University work) made an effort to demonstrate the use of information to produce maps that would facilitate analysis and decision-making by nutrition managers. This work is presented in Section 3 in the Tulane Complementary Analytical Report and several of these maps have been reproduced in the present report (including e.g. figure 5.2 and the maps in sections 4.2.3 and 4.2.4). Yet another one (on targeting of hygiene programs for nutrition outcomes) of these powerful maps are reproduced below.

Figure 3.19.

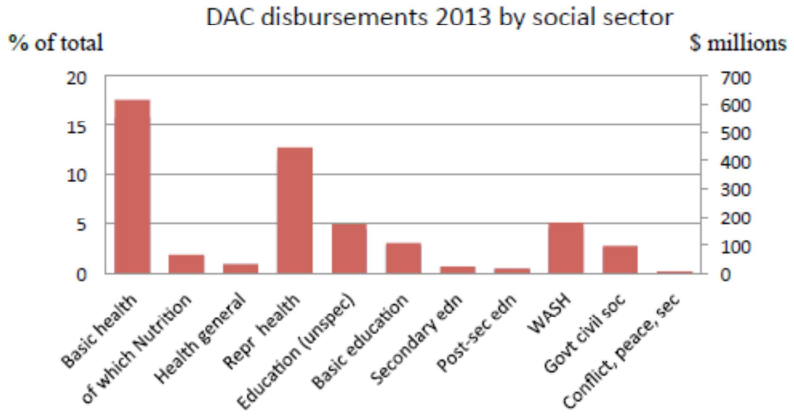
Need for hygiene programs based on underweight prevalence, percentage of children with no toilet, and presence of hygiene programs by zone*: Ethiopia DHS 2011 and REACH



The SITAN team regrets that no up-to-date information on location and coverage of nutrition-related information was made available for our mapping work but trusts that the maps produced will serve as convincing evidence of the powerful tools that can easily be put in place for nutrition decision-making and accountability once the required nutrition management information systems are established and fully functional.

Due to lack of up-to-date nutrition program data, it was also not possible for the SITAN team to do a detailed financial analysis of nutrition program budgets and expenditures in Ethiopia at present. As a substitute, the Tulane University group undertook an analysis (**Tulane Complementary Analytical Report** Section 3 b, p 231 ff.) of the Ethiopia donor disbursement for the latest financial year available, i.e. 2013. Their main conclusion is that budgetary allocations explicitly to nutrition actions are significant but modest; however, these only includes 'nutrition specific activities'. On the other hand, disbursements to 'nutrition sensitive' social sectors are very substantial, indeed, as evident from the figure below. Hence, if these resources could be effectively harnessed into 'nutrition sensitive' actions, nutrition improvements are likely to be accelerated.

Figure 3.40. Funds distributed by social sector, DAC 2013.



The final point to make regarding nutrition information systems is that they have to be combined with the appropriate systems for maintaining and updating the full data-base and, indeed, the institutional knowledge relating to nutrition developments in Ethiopia. The NNP already has provisions for establishing a national nutrition research and knowledge function and this should be implemented as quickly as possible, and provided with the adequate technical capacity to lead and coordinate future research work on nutrition in Ethiopia. It is our wish that the present SITAN exercise will contribute to such development and not become yet another *ad hoc* enquiry into the fascinating but critically important story of hunger and undernutrition in Ethiopia.

Summary Recommendations, Nutrition specific actions

Intervention	*Recommendation/ Comments*
Growth Monitoring and Promotion, GMP	Improved procedure for GMP using HEW and WDA/'development team' approach to be universally implemented (where the HEW and WDA capacity exists)
IYCF promotion	Update and harmonize IYCF education material (including child health card) and communication approach using new experiences and SITAN data. Establish clear links between GMP and IYCF promotion at community level. There should also be strong links btw IYCF promotion, Community-Led Total Sanitation, Community-based promotion of diet diversity as well as early childhood care actions
OTP using RUTF[119]	Continue to mainstream into improved HEP. Explore means to reduce 'blanket use' of high-cost, manufactured RUTF and replace with locally prepared improved foods for children linking up with IYCF promotion. Mainstream RUTF funding, procurement and distribution into existing Health Commodity Supply System. Stronger links with supplementary feeding programs
Supplementary Feeding Program	Update, operationalize and scale-up supplementary feeding policy to treat moderate acute malnutrition, MAM, and prevent severe acute malnutrition, SAM, thereby reducing OTP load and high costs of RUTF supplies (i.e. replace outdated Targeted Supplementation Feeding, TSF, operation) Nutrition supplementation in pregnancy to be reviewed
VAC supplementation	Policy needs review which should take place after completing EPHI micronutrient survey. In the meantime, develop improved implementation protocol within *routine* HEP. Continue to use EOS or CHD where HEP is not up to full capacity
Deworming	For children 1-5 years: full integration into *routine* HEP; Continue to use EOS or CHD where HEP is not up to full capacity Periodic deworming to be considered in pregnant women ANC and in school children (School health program)
Iron-Folic Acid, IFA, supplementation	IFA in pregnancy to be 'aggressively' scaled up (new reproductive health initiative good opportunity IFA in adolescent girls to be tried out at scale
Other micronutrient supplementation and fortification action	These should be reviewed in light of forthcoming results of the EPHI micronutrient survey (2015)

[119] Outpatient Therapeutic feeding Program using Ready to Use Therapeutic Foods (such as Plumpy'nut)

Summary Recommendations, Nutrition sensitive programs

Actions	*Recommendation/ Comments*
For all NNP key sectors, i.e. Health, Agriculture, Social Protection (MoLSA), Education, WASH, Gender, Trade and Industry, Finance and Economic Development	1. Define clearly sector roles and responsibilities for nutrition actions and outcomes; include in policies, programs, work-plans and budget allocations 2. Define the relevant nutrition-related outcome objectives to be achieved by the sector and identify corresponding indicators/means of verification. Set targets. 3. Prepare and present periodic progress reports on sector nutrition performance to NNP coordinating body 4. Organize and actively participate in operational research activities to develop and establish good practices
Health	Ensure that health-based nutrition actions remain at highest priority at all health administrative levels and particularly in the Health Extension Program Establish a 'national community based nutrition protocol' to ensure uniform and high quality health-based nutrition actions across the country Take the lead and organize effective Nutrition Management Information System linked to HMIS but also with other sector MIS and DRM nutrition relevant information Fully integrate 'essential nutrition supplies' (including RUTF) in Health Commodity Supply System
Agriculture	Continue current efforts to establish agriculture-based solutions to improved dietary diversity in nutritionally vulnerable households and communities Recognize that undernutrition is a problem in both food insecure and agriculture production areas and develop programs and capacities accordingly Strengthen institutional capacity for nutrition at federal, regional and *woreda* levels
Social Protection/PSNP	Recognize that this is likely to become a major avenue for nutrition improvements in the future but that the National Social Protection Policy is still new and needs time for operationalization and capacity development In the meantime, fully use the opportunity of the PSNP having adopted clear nutrition outcome objectives to build experiences Also recognize other ongoing nutrition sensitive social protection efforts like the MVH (ENGINE), etc.
Water, Sanitation and Hygiene, WASH	Poor access to safe water emerging as a major determinant of nutrition security across large parts of Ethiopia calls for redoubling of efforts and investments in this area. This will require focus on both nutritionally vulnerable areas and feasibility of water source development.

	Sanitation and hygiene actions appear to have been largely successful through CLTS approach but now require careful evaluation and adaption to improved implementation opportunities Strong linkage between education and WASH developments will help to ensure optimal reduction of stunting
Education	Nutrition sensitive actions in education sector still nascent but with great opportunities to be explored
Industry and Trade	Major role is on food fortification (to be reviewed based on results of micronutrient survey) and food marketing approaches (also need special review in light of recent evidence of strong links between dietary diversity and market access)

Summary Recommendations, Management of the National Nutrition Program Process

Actions	*Recommendation/ Comments*
Multi-sectoral nutrition management and coordinating mechanisms	1. Extend the NNP coordinating mechanisms to the *kebele* level building upon relevant existing structures and functions 2. Ensure coherence between NNP coordinating mechanisms with other related multi-sectoral mechanisms such as WASH and DRM 3. Establish an active process of knowledge-sharing and continued learning among functionaries participating in the NNP coordinating mechanisms at different levels 4. Maintain a strong 'political focus' and advocacy, communication and education on nutrition in development to ensure the work of the NNP coordinating mechanisms are receiving continued strong political and public support
Multi-sectoral nutrition management information systems	1. Speed up finalization and implementation of the 'NNP Monitoring Tool' and related and harmonized systems to monitor nutrition developments and outcome of nutrition actions across Ethiopia 2. Ensure that all nutrition-related systems across government sectors and actions are harmonized as much as possible to allow for analysis of how multi-sectoral developments and actions are affecting nutritional outcomes 3. Extend and ensure that nutrition information is both collected and used at community/*kebele* level to allow the operational level nutrition workers the opportunity to immediately and effectively address nutrition problems within their communities 4. Ensure that key 'benchmark' surveys and research – such as the Demographic and Health Surveys – to the extent possible incorporate key indicators that will help analysis of nutrition developments 5. Develop and establish effective systems for presentation of nutrition trends, outcomes of nutrition actions and gaps that need to be addressed. Use the Tulane model as appropriate for using mapping approaches to present such information to nutrition decision-makers 6. Speed up the establishment of an 'NNP research coordination function'

Concluding remarks

The Federal Democratic Republic of Ethiopia is in a process of rapid growth and transformation. Improved nutrition should be an outcome of these developments but it is also a critical prerequisite condition for success of such policies and programs.

We recognize the great progress being made in improving the nutrition situation in Ethiopia during the last decade under strong government leadership and with very significant contributions and support from development partners. We also recognize the strong community-based social development capacities that have been built up and which have already proven to provide a solid foundation for effective nutrition action at operational level.

However, there is still a long way to go before the people in Ethiopia will truly have realized their right to nutrition security. Too many women of child-bearing age are still undernourished (thinness) and anemic, 40% of all children under five years of age are still stunted and the number of children with acute malnutrition remains high. The capacity for providing critical social services is lagging behind in many parts of the 'Developing Regional States, i.e. Somali, Affar, Gambela and Benishangul-Gumuz, and livelihoods are threatened in parts of the country. The situation among poor families in the rapidly expanding urban population needs urgent attention, etc. Hence, the government and the peoples of the Federal Democratic Republic of Ethiopia will need to continue and further strengthen their efforts to free the country from hunger and malnutrition, but the good progress made should serve as a foundation and encouragement in their continued endeavors.

The great opportunity to further accelerate nutrition improvements in Ethiopia appears to lie in effective mobilization of all relevant resources and capacities across the key sectors and at the different administrative levels. The rapid changes taking place offer an exceptional opportunity to ensure that nutrition considerations and objectives becomes part of the new and emerging policies and programs right from the beginning. However, the rate of rapid change also poses great challenges as each sector is heavily preoccupied in addressing what they see as their respective main responsibilities.

Education is struggling to ensure better quality as they expand basic education and extend higher level education. Health is aspiring to improved disease treatment and control as their services system is becoming technically up to good standard. Agriculture is the major productive sector in Ethiopia and is hard pressed to produce for higher living standards and for export. Ministry of Water and Energy are building some of the largest hydro-electrical plants in the world in order to secure a competitive edge for local industry and other developments. And so on…. *In this situation, how can each of these sectors also be motivated and supported to consider their role and to make the necessary investments for nutrition improvements?*

We notice that the knowledge of nutrition is slowly but surely improving: starting from the Women Development Army regularly organizing 'development team' meetings followed by *kebele* committees (e.g 'command posts') organizing local nutrition actions, and *woreda* officials having attended good nutrition planning training sessions. This process is encouraging but would probably benefit from support from continued and additional strong nutrition advocacy and communication in order to maintain the momentum of the impressive nutrition scaling-up process in Ethiopia.

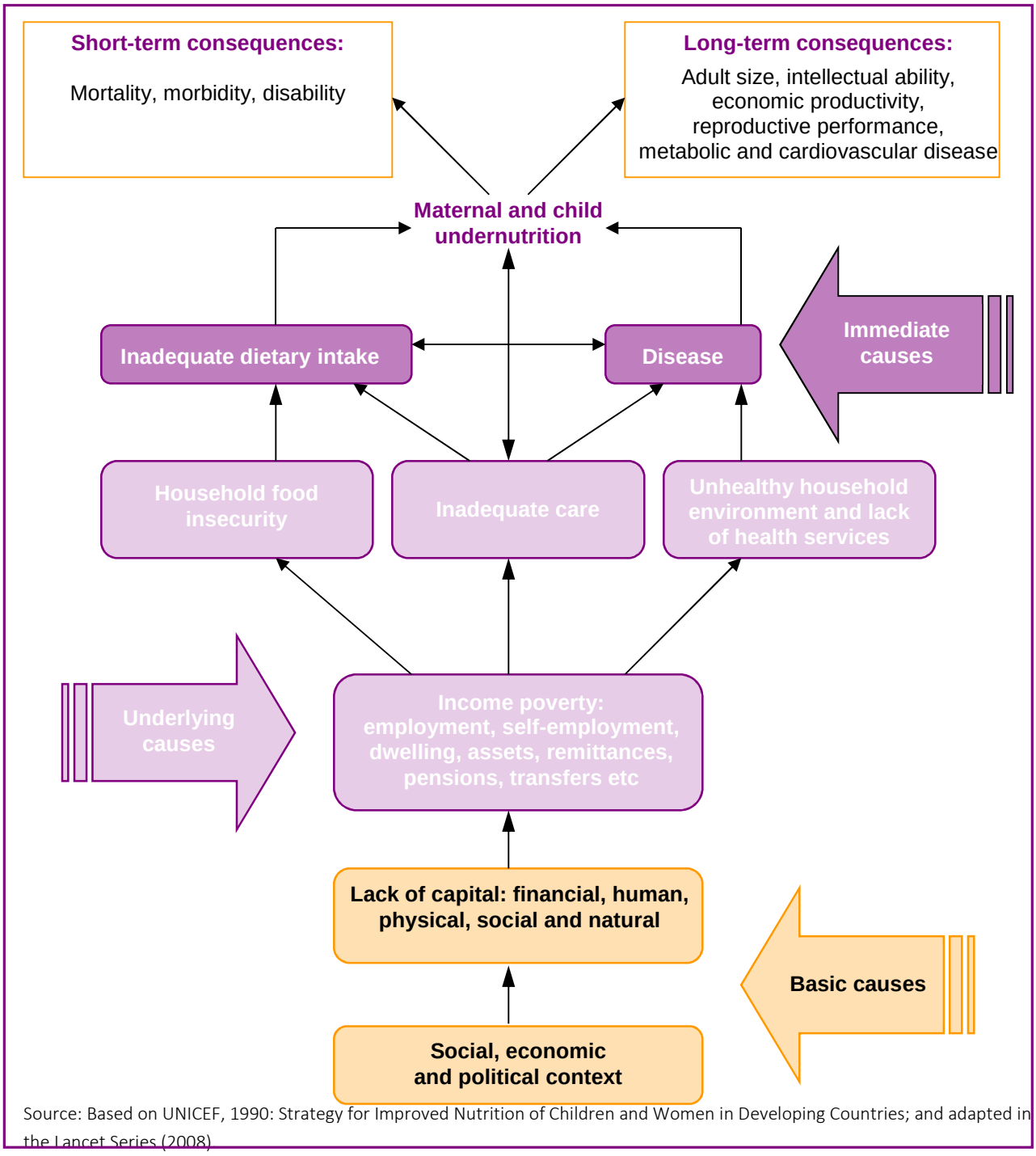
Maybe the most important observation in this SITAN work is the strong indication that all the impressive socio-economic developments in Ethiopia during the last decade have had rather equitable nutrition outcomes! Important differences certainly exist in Ethiopia between people who are rich and those who are poor but our analysis indicates that both groups have managed to improve their human development status to a similar degree as measured by nutrition improvement. We suggest that this is a result of both equitable access to improved social services and equitable increases in basic incomes leading to comparable improvements in food intake.

This brings to mind a quote from an aforementioned study[120] reviewing the positive nutrition outcomes of nutrition developments in Peru, Brazil and Bangladesh. One major 'lesson learnt' according to this report is: "*the importance of linking nutrition with concerns for poverty and hunger alleviation, reduction of food insecurity and reduction of social inequities".* It appears that Ethiopia is on track to further prove the truth of these principles.

[120] Levinson JF and Balarajan Y. Addressing Malnutrition Multisectorally: What have we learned from recent international experience? UNICEF Nutrition Working Paper. New York; UNICEF and MDG Achievement Fund: 2013.

Picture: The SITAN team learning from the Women Development Army, the Health Extension Worker and the Agriculture Development Agent in Faya *kebele,* Sekota *woreda,* in the northern Amhara highlands

Appendix 1: Nutrition Causality Framework, Lancet 2008



Source: Based on UNICEF, 1990: Strategy for Improved Nutrition of Children and Women in Developing Countries; and adapted in the Lancet Series (2008)

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Table {SO1 R1.1}: Result 1.1 Nutritional status of adolescents improved

Result 1.1: Nutritional status of adolescents improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Provide comprehensive and routine nutritional assessment and counselling services for adolescents at community, school and health facility levels.	No intervention.								
2. Ensure adolescents' access to micronutrient services.	1. School-based deworming.	Implementation has not begun.	_R1.1	Plan for 82 woredas, still under discussion.		Policy: SHN strategy in place.	SHN includes deworming as service to be provided.	*Research question*: What is the appropriate strategy for school age children?	
	2. Prevention of iron, vitamin A and iodine deficiencies via schools.	No planned intervention at this time.					Iodine: universal salt iodization in place, use should be promoted at schools.	*Research question*: What is the appropriate strategy for prevention of iron and vitamin A deficiencies?	
3. Conduct Behavioural Change Communication to prevent harmful traditional practices.	1. School clubs, linked to HEWs, WDA	Clubs discuss traditional practices harmful to good nutritional status; girls and boys targeted.	In school adolescent girls	This initiative has started in ten woredas (80 Kebeles) of Amhara and Oromiya.		Policy: SHN strategy includes teaching of life skills.	Successful clubs ongoing currently should offer lessons learned and best practices. School girls are sources of knowledge, powerful motivators among households.	End line evaluation being conducted to assess the major achievements and challenges of the intervention	

Result 1.1: Nutritional status of adolescents improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
	2. Community clubs, linked to HEWs, WDA	Clubs discuss traditional practices harmful to good nutritional status; captures girls not currently in school.	In and out of school adolescent girls	The intervention started in 10 Woredas (80 Kebeles) in Amhara and Oromiya.	Report from IP (DSW)	Policy: SHN strategy includes teaching of life skills. No monitoring of implementation. *Supply*: Out of school girls difficult to reach due to poor community structure of clubs. *Demand*: Low perceived benefit, social norms.	Successful clubs ongoing currently should offer lessons learned and best practices. WDA and M2M support groups may be more appropriate target for support to out of school adolescents due to poor community club structure.	*Research question*: What is the most effective platform for reaching out of school adolescents?	
4. Ensure access to reproductive health information and services for boys and girls.	1. Family planning	Girls and boys are informed about the benefits of FP through in and out of school club activities	In and out of school adolescent boys and girls	The intervention started in 10 Woredas (80 Kebeles) in Amhara and Oromiya	Report from IP (DSW)	*Supply*: Out of school adolescents difficult to reach due to poor community structure of clubs.	Successful clubs ongoing currently should offer lessons learned and best practices. WDA and M2M support groups may be more appropriate target for support to out of school adolescents due to poor community club structure.		
	2. Reproductive health services	Girls and boys are informed about reproductive health services in their catchment areas	In and out of school adolescent boys and girls	The intervention started in 10 Woredas (80 Kebeles) in Amhara and Oromiya	Report from IP (DSW)	*Supply*: Out of school adolescents difficult to reach due to poor community structure of clubs.	Successful clubs ongoing currently should offer lessons learned and best practices. WDA and M2M support groups may be more appropriate target for support to out of school adolescents due to poor community		

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.1: Nutritional status of adolescents improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
							club structure.		
5. Conduct regular monitoring of the nutritional status of school-age children/students together with biannual de-worming.	No intervention.								
6. Promote girls' education.	Not assessed.								
7. Promote economic empowerment for out-of-school adolescents through various economic strengthening opportunities.	Adolescent Nutrition	KAP assessment done, promotion of basic nutrition and improved nutrition for adolescent girls ongoing	Adolescent girls of age 15-19 both in and out of school	10 Woredas (80 Kebeles) in Amhara and Oromia regions	Report from IP	*Supply*: Multisectoral collaboration has begun within partner organizations – needs to be extended to Government ministries for cohesive intervention. *Demand*: Low perceived benefits, social and gender norms.	SHR strategy endorsed. WDA already in place, could have defined role in promotion of economic empowerment among out of school adolescents.	Baseline report	

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.1: Nutritional status of adolescents improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
8. Promote the development of life skills (such as assertiveness, negotiating, decision-making, leadership, and bargaining) for both boys and girls.	Adolescent Nutrition	KAP assessment done, promotion of basic nutrition and improved nutrition for adolescent girls ongoing	Adolescent girls of age 15-19 both in and out of school	10 Woredas (80 Kebeles) in Amhara and Oromia regions	Report from IP	*Supply*: Multisectoral collaboration has begun within partner organizations – needs to be extended to Government ministries for cohesive intervention. *Demand*: Low perceived benefits, social and gender norms.	SHR strategy endorsed. WDA already in place, could have defined role in development of life skills among adolescent girls and boys.	Baseline report	

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Table {SO1 R1.2}: Result 1.2: Nutritional status of women improved

Result 1.2: Nutritional status of women improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
1. Provide comprehensive and routine nutritional assessment, counselling and support services for pregnant and lactating women.	1. Antenatal care (ANC)	Assess nutritional status; promote maternal nutrition.	Pregnant women	Full-scale implementation.	34% of women received ANC from a skilled provider (2011)[121]	*Demand*: Perceived benefit, high workload, social acceptability/norms. *Supply:* Quality of counselling unknown.	Some HDA networks are currently monitoring pregnancy status of women in community and recording progress[122] – could be platform for counselling.	In areas with CBN, increase in percentage of mothers receiving any ANC, visiting a HP or HC for ANC and receiving breastfeeding counselling at ANC was observed.[123]	
	2. Postnatal care (PNC)	Assess nutritional status; promote maternal nutrition.	Lactating women	Full-scale implementation.	7% of women received PNC within two days of delivery (2011)[124]	*Demand:* Low institutional or attended delivery can lead to low PNC. *Supply:* Timing of PNC visit is critical, ideally immediately after birth; quality of counselling unknown.	Some HDA networks are currently monitoring pregnancy status of women in community and notifying HEWs of delivery timing[125] – could be platform for counselling.	No evidence that nutritional services are adequately provided within PNC services.	Increase in institutional delivery which could lead to an increase in PNC (promotion of early initiation)
	3. Targeted Supplementary Feeding (TSF)	Provides food to malnourished pregnant and lactating women.							

[121] CSA (Ethiopia) and ICF International (2012). Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.
[122] Situation analysis woreda field visits.
[123] White, J and Mason, JB (2012). Assessing the impact on child nutrition of the Ethiopia Community-based Nutrition Program: Report to UNICEF of an evaluation study. Tulane University School of Public Health and Tropical Medicine; New Orleans, USA.
[124] CSA (Ethiopia) and ICF International (2012). Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.
[125] Situation Analysis woreda field visits.

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.2: Nutritional status of women improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
2. Ensure that pregnant and lactating women have access to micronutrient services.	1. Antenatal care (ANC)	Provision of iron-folic acid (IFA) supplementation; provision of deworming medication; promotion of iodized salt consumption.	Pregnant women	Full-scale implementation.	34% of women received ANC from a skilled provider (2011)[126] 17% of women took iron tablets during last pregnancy 6% of women took intestinal parasite drugs 15% of women live in a household with iodized salt (with a birth in last 5 years, among households tested)	*Demand*: Perceived benefit, high workload, social acceptability/norms. *Supply:* Quality of counselling unknown.	Some HDA networks are currently monitoring pregnancy status of women in community and recording progress[127] – could be platform for counselling on micronutrients; notifying HEWs of need for follow-up.		
	2. Postnatal care (PNC)	Provision of vitamin A supplementation at two months post-partum.	Lactating women	Full-scale implementation.	7% of women received PNC within two days of delivery (2011)[128] 16% of women received vitamin A post-partum (within 2 months of delivery)	*Demand:* Low institutional or attended delivery can lead to low PNC. *Supply:* Timing of PNC visit is critical, ideally immediately after birth; quality of counselling unknown.	Some HDA networks are currently monitoring pregnancy status of women in community and notifying HEWs of delivery timing[129] – could be platform for counselling on micronutrients and notifying HEWs of need for follow-up.		

[126] CSA and ICF International. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; Central Statistical Agency and ICF International: 2012.
[127] Situation analysis woreda field visits.
[128] CSA and ICF International. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; Central Statistical Agency and ICF International: 2012.
[129] Situation Analysis woreda field visits.

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.2: Nutritional status of women improved									
Initiatives	Implementation modality / mechanism	How modality / mechanism contributes to initiative	Target population	Geographic Coverage	Who is being reached?	Implementation Challenges	Opportunities	Evidence (evaluations and future research questions)	Special considerations
3. Ensure free distribution and utilization by pregnant and lactating women of insecticide-treated nets in all malaria-endemic woredas.	Not assessed.								
4. Support the involvement of women's development groups in nutrition sensitive agriculture and livelihood programmes.	Not assessed.								
5. Ensure access to time and labor saving technologies.	Not assessed.								

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.2: Nutritional status of women improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
6. Ensure that lactating mothers have access to appropriate reproductive services.	Not assessed.								
7. Promote the increased engagement of husbands and other household members in playing key roles in providing continuous care for pregnant and lactating women.	Not assessed.								

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.2: Nutritional status of women improved									
Initiatives	Implementation modality / mechanism	How modality / mechanism contributes to initiative	Target population	Geographic Coverage	Who is being reached?	Implementation Challenges	Opportunities	Evidence (evaluations and future research questions)	Special considerations
8. Promote shifts of social norms on food taboos preventing adequate nutrition for pregnant and lactating women.	Not assessed.								
9. Ensure male involvement in reproductive health services such as PMTCT, antiretroviral treatment, family planning, antenatal and postnatal service and child care, among others.	Not assessed.								

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Result 1.2: Nutritional status of women improved									
Initiatives	Implementation modality / mechanism	How modality / mechanism contributes to initiative	Target population	Geographic Coverage	Who is being reached?	Implementation Challenges	Opportunities	Evidence (evaluations and future research questions)	Special considerations
10. Initiative targeting non-pregnant and non-lactating women.	Not assessed.								

Strategic Objective 1: Improve the nutritional status of women (15-49 years) and adolescents (10-19 years)

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Table (SO2 R2.1}: Result 2.1: Improved nutritional status of children 0-24 months

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Promote, support and protect optimal breastfeeding practices for infants 0-6 months	1. Growth-monitoring & promotion (GMP)	Children attending monthly GMP are weighed and have their growth assessed. Mothers of children with faltering growth or that are underweight receive tailored one-on-one counselling on IYCF and the '5W' approach to identify possible causes of growth faltering.	Children 0-23 months and their mothers / caretakers	Agrarian regions only. Implemented in all rural woredas in Amhara, SNNPR & Tigray, and nearly all rural woredas in Oromia. Implementation has scaled-up (from 39 woredas in 2008 to 365 in 2015).	Participation in GMP has increased (from 8% in 2008 to 48% in 2015, nationally).[130] Counselling is only given to participating children who are faltering or underweight, which is < 10%[131] of children participating.	*Demand*: Difficult terrain or migration; perceived benefit of service; workload of the mother too high to attend; social acceptability.[132] *Supply*: Counselling only received by faltering children – quality of counselling unknown.	Undefined role of HDA - could be a platform for follow-up counselling of faltering and underweight children.	In areas with CBN, evidence of more rapid decrease in stunting, improvement in exclusive breastfeeding (this evaluation was of the previous modality of CBN).[133] *Research question*: Is there a difference in implementation quality post-HDA change?	Confusion resulting from target age group changing to under-5, which greatly increases HEW workload; needs different skill and equipment and decreases counselling opportunity.
	2. Mother-to-mother support groups (M2M)	Mothers groups are formed and facilitated by leaders to discuss IYCF.	Pregnant/lactating women, mothers of children 0-23 months.	DRS regions only. Initial pilot woredas: Afar: 4, Somali: 10, BG: 3, Gambella: 5.	No data available on coverage or participation; variable number of kebeles covered within woreda. Afar: 20 woredas (100 kebeles).	*Demand*: Livelihood needs prioritized (move for water, pasture). *Supply*: No IYCF tool being used for discussions; complementary food difficult due to limited food diversity; HEWs not able to monitor due to mobility; limited feedback from WoHo and RHB.	Provides viable platform for community IYCF (CIYCF) promotion and education; creates awareness for other health behaviours; members contribute money for emergency support and plan to use for income generation in future[134].	Behaviour change seen at individual level in two woredas (qualitative), e.g. decrease in prelacteal feeds, increase in exclusive breastfeeding[135]. *Research questions*: What is the community behavioural change effect of M2M groups? What are the bottlenecks, barriers?	Materials must be provided in pictorial format and local language.

[130] Routine data from NNP monitoring tool.
[131] Routine data from NNP monitoring tool.
[132] Situation analysis woreda field visits.
[133] White JM and Mason JB. Assessing the impact on child nutrition of the Ethiopia Community-based Nutrition Program. Report to UNICEF of an evaluation study. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2012.
[134] Situation analysis woreda field visits.
[135] Situation analysis woreda field visits.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
						Policy: Lack of monitoring mechanism.			
	3. Community discussions	Discussions organized among community members, often focus on health and nutrition issues, including IYCF.	Every household in catchment area	Everywhere with the HDA 1 to 5 and 1 to 30 networks.	No routine data available on coverage or participation. HDA practices vary based on regional guidelines, motivation/skill of members, usual communication with community.[136]	*Demand:* Perceived benefit of discussion, and perceived quality of facilitator/leader. *Supply:* Discussion not limited to nutrition; quality/accuracy of messages delivered on nutrition unknown.	Undefined structure for community discussion currently, but potential for it to be integrated into the responsibilities of the HDA networks.	In areas with IYCF programming, 65% of community workers (mostly HDA/WDA) discussed IYCF in community meetings; improvement in breastfeeding practices was found.[137]	Previous modality of community conversations led by VCHWs, currently not clear structure or guidance on frequency, content or structure of discussions re: nutrition.
	4. Antenatal Care (ANC)	Pregnant women attending ANC receive counselling on early initiation of breastfeeding as well as appropriate IYCF practices.	Pregnant women	Full-scale implementation.	34% of women received ANC from a skilled provider (2011)[138] **EDHS does not provide data on who receives counselling within ANC.*	*Demand*: Perceived benefit, high workload, social acceptability/norms. *Supply:* Delivery and quality of counselling unknown.	Some HDA networks are currently monitoring pregnancy status of women in community and recording progress[139] – could be platform for counselling.	In areas with CBN, increase in percentage of mothers receiving any ANC, visiting a HP or HC for ANC and receiving breastfeeding counselling at ANC was observed.[140]	
	5. Postnatal Care (PNC)	Mothers receiving PNC immediately after birth are encouraged to practice early initiation of breastfeeding and are discouraged from giving pre-lacteal feeds	Lactating women	Full-scale implementation.	7% of women received PNC within two days of delivery (2011)[141]	*Demand:* Low institutional or attended delivery can lead to low PNC. *Supply:* Timing of PNC visit is critical, ideally immediately after birth; delivery and quality of	Some HDA networks are currently monitoring pregnancy status of women in community and notifying HEWs of delivery timing[142] – could be platform for counselling.	No evidence. *Research question*: What proportion of women receiving PNC also receives breastfeeding counselling?	Increase in institutional delivery which could lead to an increase in PNC and promotion of appropriate breastfeeding.

[136] Situation analysis woreda field visits.
[137] CFSN. Final report: Sentinel-site surveillance for Ethiopia infant and young child nutrition program: Third round survey. Center for Food Science and Nutrition, College of Natural Science, Addis Ababa University: 2014.
[138] CSA and ICF International. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; Central Statistical Agency and ICF International: 2012.
[139] Situation analysis woreda field visits.
[140] White JM and Mason JB. Assessing the impact on child nutrition of the Ethiopia Community-based Nutrition Program. Report to UNICEF of an evaluation study. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2012.
[141] CSA and ICF International. Ethiopia Demographic and Health Survey 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA; Central Statistical Agency and ICF International: 2012.
[142] Situation Analysis woreda field visits.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
						counselling unknown.			
2. Promote, support and create access to appropriate complementary feeding for 6-24 month-olds	1. GMP	Children attending GMP are weighed and their growth assessed. Mothers of children with faltering growth and those children that are found to be underweight receive tailored one-on-one counselling on IYCF and the '5W' approach to identify possible causes of growth faltering	Children 6-24 months and their mothers / caretakers	Agrarian regions only. Implemented in all rural woredas in Amhara, SNNPR & Tigray, and nearly all rural woredas in Oromia. Implementation has scaled-up (from 39 woredas in 2008 to 365 in 2015).	Participation in GMP has increased (from 8% in 2008 to 48% in 2015, nationally).[143] Counselling is only given to participating children who are faltering or underweight, which is < 10% of children participating.	*Demand*: Difficult terrain or migration; perceived benefit of service; workload of the mother too high to attend; social acceptability.[144] *Supply*: Counselling only received by faltering children – quality of counselling unknown.	Undefined role of HDA - could be a platform for follow-up counselling of faltering and underweight children.	In areas with CBN, evidence of more rapid decrease in stunting (this evaluation was of the previous modality of CBN).[145] *Research question*: Is there a difference in implementation quality post-HDA change?	Confusion resulting from target age group changing to under-5, which greatly increases HEW workload; needs different skill and equipment and decreases counselling opportunity.
	2. M2M	Mothers groups are formed and facilitated by leaders to discuss IYCF.	Pregnant/lactating women, mothers of children 0-23 months.	DRS regions only. Initial pilot woredas: Afar: 4, Somali: 10, BG: 3, Gambella: 5.	No data available on coverage or participation; variable number of kebeles covered within woreda. Afar: 20 woredas (100 kebeles).	*Demand*: Livelihood needs prioritized (move for water, pasture). *Supply*: No IYCF tool being used for discussions; complementary food difficult due to limited food diversity; HEWs not able to monitor due to mobility; limited feedback from WoHo and RHB. *Policy*: Lack of	Provides viable platform for community IYCF (CIYCF) promotion and education; creates awareness for other health behaviours; members contribute money for emergency support and plan to use for income generation in future[146].	Behaviour change seen at community level, e.g. decrease in prelacteal feeds, increase in exclusive breastfeeding[147]. *Research questions*: What is the community behavioural change effect of M2M groups? What are the bottlenecks, barriers?	Materials must be provided in pictorial format and local language.

[143] Routine data from NNP monitoring tool.
[144] Situation analysis woreda field visits.
[145] White JM and Mason JB. Assessing the impact on child nutrition of the Ethiopia Community-based Nutrition Program. Report to UNICEF of an evaluation study. Tulane School of Public Health and Tropical Medicine, Department of Community Health and Behavioral Sciences. New Orleans: 2012.
[146] Situation analysis woreda field visits.
[147] Situation analysis woreda field visits.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
						monitoring mechanism.			
	3. Community discussions	Discussions organized among community members, often focus on health and nutrition issues, including IYCF.	Every household in catchment area	Everywhere with the HDA 1 to 5 and 1 to 30 networks.	No data available on coverage or participation. HDA practices vary based on regional guidelines, motivation/skill of members, usual communication with community.[148]	*Demand:* Perceived benefit of discussion, and perceived quality of facilitator/leader. *Supply:* Discussion not limited to nutrition; quality/accuracy of messages delivered on nutrition unknown.	Undefined structure for community discussion currently, but potential for it to be integrated into the responsibilities of the HDA networks.	In areas with IYCF programming, 65% of community workers (mostly HDA/WDA) discussed IYCF in community meetings; improvement in complementary feeding practices was found.[149]	Previous modality of community conversations led by VCHWs, currently not clear structure or guidance on frequency, content or structure of discussions re: nutrition.
3. Prevent & control micronutrient deficiencies	1. Vitamin A supplementation (VAS) via EOS, CHD or routine delivery (HEP)	Vitamin A capsules given twice annually (every six months) to reduce risk of mortality, VAD.	Children 6-24 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and Somali only CHD or HEP: dependent on timing of transition	Coverage data from NNP monitoring tool.	*Demand*: Perceived benefit; knowledge of when child is due (routine). *Supply*: Regular supply is needed for routine; HEWs must know when children need supplementation and be able to deliver service.	Transition to routine delivery successful only in woredas with 1) HEW records that monitor when children are due monthly and 2) HDA/WDA network functional in notifying caretakers that child is due.[150]	Vitamin A supplements should be provided in populations with elevated prevalence of deficiency[151]. *Research question*: What is the prevalence of VAD in Ethiopia? *Micronutrient Survey in process currently.	Need to assess readiness for transition to routine delivery; change in coverage in transition to routine delivery.
	2. Deworming (DW) via EOS, CHD or routine delivery (HEP)	Deworming medication given twice annually (every six months) to reduce risk of anaemia.	Children 24 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and Somali only.	Coverage data from NNP monitoring tool.	*Demand*: Perceived benefit; knowledge of when child is due (routine). *Supply*: Regular supply is needed for routine; HEWs must know when	Transition to routine delivery successful only in woredas with 1) HEW records that monitor when children are due monthly and 2) HDA/WDA network functional in notifying	WHO recommends deworming in populations with elevated presence of soil-transmitted helminths.	Need to assess readiness for transition to routine delivery; change in coverage in transition to routine delivery.

[148] Situation analysis woreda field visits.
[149] CFSN. Final report: Sentinel-site surveillance for Ethiopia infant and young child nutrition program: Third round survey. Center for Food Science and Nutrition, College of Natural Science, Addis Ababa University: 2014.
[150] Situation analysis woreda field visits.
[151] WHO. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Geneva; World Health Organization (WHO): 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
				CHD or HEP: dependent on timing of transition.		children need supplementation and be able to deliver service.	caretakers that child is due.[152]		
	3. Salt iodization	Iodization of salt for consumption reduces iodine deficiency disorder (IDD).	Children 6-24 months of age	Universal.	16% of children 6-59 months of age living in households with iodized salt, of those tested (EDHS 2011).	*Demand*: Perceived benefit of using. *Supply*: Access to iodized salt; adequacy of iodization.		Salt iodization is an Essential Nutrition Action (ENA); less than 20% household access is indicator for iodine supplementation[153]. *Research question*: What are the barriers/bottlenecks to using iodized salt? Should supplementation (e.g. via MNPs) be considered until HH access improved?	
4. Early detection and management of acute malnutrition and common childhood infections	1. MUAC screening at GMP	Children identified as underweight or severe underweight further screened for acute malnutrition.	Children 0-24 months of age	Agrarian Regions - fully implemented in rural woredas in Amhara, SNNPR & Tigray, and partially implemented in rural woredas in Oromia (# woredas).	No evidence.	*Demand*: Participation: dependent on GMP participation. *Supply*: Routine supplies.	Maximizing participation in GMP could further increase screening for and early detection of MAM/SAM.	No evidence.	
	2. MUAC screening at EOS/CHD/routine services (HEP)	Early detection of acute malnutrition; referral for treatment as appropriate.	Children 0-24 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and	Coverage data from NNP monitoring tool.	*Demand:* Dependent on coverage of EOS/CHD/routine services. *Supply:* Routine supplies.	Early identification of MAM/SAM is dependent on maintaining coverage in transition to routine delivery.	CMAM evaluation: From July-August 2011, 93.6% of under-5 children were screened via EOS/CHD (6 regions, 17 woredas)[154].	Potential for screening coverage to decrease with transition to routine delivery.

[152] Situation analysis woreda field visits.
[153] WHO. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Geneva; World Health Organization (WHO): 2013.
[154] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
				Somali only CHD or HEP: dependent on timing of transition					
	3. CMAM: health post	Management of SAM at community level.	Children 0-24 months of age (uncomplicated SAM)	Full-scale implementation. *Select locations in DRS.	Data from NNP monitoring tool.	*Demand*: Caretakers' perceived benefit of service; workload; distance from HP. *Supply*: Quality of services; availability of CMAM at HP; routine supplies.	External CMAM monitors being phased out; opportunity to streamline data collection/use needs and build capacity of HEP workers.	Significant increase in services provided at HP level from 2008-2011[155]. *Research questions*: Of children screened, what proportion enters treatment? What are the barriers and bottlenecks to treatment?	If coverage of MUAC screening reduced in transition to routine delivery, identification and treatment of acute malnutrition will decrease. Equity concerns: Decreased coverage in Afar, Somali with lack of HEP; hotspots prioritized[156].
	4. CMAM: health centre (HC)	Management of SAM at facility level.	Children 0-24 months of age (complicated SAM)	Full-scale implementation. *Select locations in DRS.	Data from NNP monitoring tool.	*Demand*: Caretakers' perceived benefit of service; workload; distance from HC. *Supply*: Quality of services; Availability of CMAM at HC; routine supplies.	External CMAM monitors being phased out; opportunity to streamline data collection/use needs and build capacity of HEP workers.	Significant increase in services provided at HC level from 2008-2011[157]. *Research questions*: Of children screened, what proportion enters treatment? What are the barriers and bottlenecks to treatment?	If coverage of MUAC screening reduced in transition to routine delivery, identification and treatment of acute malnutrition will decrease. Equity concerns: Decreased coverage in Afar, Somali with lack of HEP; hotspots (1/2) prioritized[158].
	5. iCCM/IMNCI: health post and health	Identification and management of diarrheal disease, acute malnutrition,	Children 0-24 months of age	Full-scale implementation.	5 million children (5,011,332) iCCM services throughout the country since launch in	*Demand*: Low utilization of services. *Supply*: Stock out of	High FMOH and partner support. Encouraging Quality of	JHU iCCM independent evaluation ICCM routine	

[155] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[156] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[157] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[158] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
	centre	IYCF practices.			2011. Services are mainly for pneumonia, malaria, diarrhoea and SAM.	drugs and supplies.	Care. Launch of community-based new born care.	monitoring database and analysis iCCM supplement	
5. Ensure access and utilization of WASH practices	1. OneWASH National Programme	Delivery of rural and urban WASH services to communities, schools and health facilities.	*Safe water access*: 6.284 million households – 26.6 million persons (rural), 4.4 million persons (urban); 22,342 primary and 643 secondary schools; 7,772 HPs/HCs *Improved sanitation access*: 6.725 million households, 6,122 schools, 7,037 HPs/HCs with improved latrines	Full-scale implementation.	*Safe water access*: 67% of population. *Improved sanitation access*: 66% of population.	*Demand*: Perceived benefit of sanitation and hygiene services; cultural practices/norms; social acceptability. *Supply*: Drought sensitive areas, access to water source, advanced technology needed to tap source in certain locations.	Providing access to improved WASH services can be coupled with promotion for and education on appropriate behaviours for improving nutrition status.	National WASH Inventory as a baseline, annual sustainability audits and midline and endline reviews. Joint donor and government field reviews (annually).	Programme targets based on additional need to achieve GTP goals for access to safe water, critical hand washing and ODF communities.[159] Discrepancies in coverage of water and sanitation access exist based on data source used. Data on USE and data on ACCESS vary due to the level of non-functionality of water schemes.
	2. OneWASH Plus	Strengthened delivery of urban WASH services (community, schools, health facilities), linking water resources to WASH practices and increasing participation of women and children.	Water: 100,000 persons Sanitation: 250,000 persons	8 woredas in 4 regions: Amhara, Oromia, Tigray, Somali.	Women, children and men in urban and rural settings.	*Demand*: Perceived benefit of sanitation and hygiene services; cultural practices/norms; social acceptability. *Supply*: Drought sensitive areas, access to water source, advanced technology needed to tap source in certain locations.	Programme "concept proofs" innovations in private sector involvement, tariff, regulation, resilience and urban sanitation which will be documented and used in the ONEWASH Consolidated WASH Account.	Baseline conducted in 2014. Annual sustainability audits and midline and endline.	UNICEF is both the implementer of the ONEWASH Plus and a contributor to the ONEWASH Consolidated WASH Account (pool fund).

[159] FDRE. One Wash National Program. A Multi-Sectoral SWAp. Program Document, Final. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia: 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
	3. WASH/MUS/ CBN	Linking WASH, MUS and CBN for improved food security; improved water supply in communities, schools, health facilities; access to and promotion of sanitation and hygiene.	1,400,000 children and adults	55 woredas.	1800 community water supplies; 550 health centres and schools.			No evidence. Baseline, mid-term and end-line evaluation in programme areas is planned to measure changes in diarrhoea and stunting among same households.[160]	
	4. JAP (Joint Action Plan)	2012-2015 costed plan to address severely water insecure woredas of Afar and Somali region with resilient WASH solutions.	234,000 people in Afar and 169 kebele residents in the Somali region	169 kebeles out of 270 kebeles identified as prone to water trucking in Somali Region; 24 water scarce kebeles in Afar.		JAP is a joint initiative of all UN and NGO partners which requires significant coordination.	To mitigate the effect of drought by ensuring all-year-round water availability through sustainable water supply, hence reduced water trucking in Somali Region.		JAP evaluation currently under preparation.
6. Link food-insecure households with children under two years of age to social protection services and nutrition sensitive livelihood and economic opportunities	1. Productive Safety Net Programme (PSNP)	Households with children under-2 are beneficiaries, including direct support for PLW.	Households with children under-2	Amhara, Oromia, Tigray, SNNPR, Somali, Afar, Dire Dawa, Harari	6.8 million beneficiaries in 2012/2013	*Demand*: Perceived benefit and eligibility to participate; awareness of programme availability. *Supply*: Sustained funding adequate to reach all targeted beneficiaries.	Targeting based on nutrition criteria is ongoing in some regions; contingency budget used for PLW and children with MAM where TSF not present.[161] Targeting of vulnerable households with PLW and children under-2 has potential to improve nutrition outcomes. Public works that are nutrition sensitive can contribute to improving	No evidence of type of transfer most important for improving nutrition outcomes. Decrease in food gap months and increase in food groups consumed among households with PSNP.[164] No improvement in diet quality among children 6-24 months or	Capacity and needs of population groups (e.g. regions, zones, etc.) need to be considered prior to implementation. Strengthening linkage between PSNP and GMP is important for ensuring PLW and caretakers of children under-2 receive preventive nutrition services. Monitoring of

[160] UNICEF. Wet Nutrition: Multiple Use Systems for Water, Sanitation and Hygiene (WASH), Addis Ababa, Ethiopia; UNICEF: 2014.
[161] Situation analysis woreda field visits.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
							nutrition outcomes; should be coupled with BCC.[162] Regular meeting of PSNP beneficiaries can be successfully used for nutrition relevant BCC.[163] Soft conditionalities relevant for improving nutrition outcomes are included in the new phase; must be enforced and monitored.	nutrition outcomes among children 6-59 months with PSNP participation.[165]	implementation specific to nutrition sensitive components must be initiated and maintained to assess nutrition outcomes.
	2. Income generation					*Demand*: *Supply*:			
	3. Homestead production of vegetables and fruits, and small-animal rearing	Households with children under-2 are beneficiaries, including direct support for PLW.	Households with children under-2			*Demand*: Perceived benefit, ability to implement. *Supply*: Provision of materials; household irrigation source and production space.		No evidence.	Targeting of vulnerable households for HH production may be method for improving equity; needs evaluation.

[164] Bossuyt A. Increasing Nutrition outcomes of PSNP and HABP. Part 1. Main Report: Main report. Addis Ababa, Ethiopia: 2014.
[162] Bossuyt A. Increasing Nutrition outcomes of PSNP and HABP. Part 1. Main Report: Main report. Addis Ababa, Ethiopia: 2014.
[163] Bossuyt A. Increasing Nutrition outcomes of PSNP and HABP. Part 1. Main Report: Main report. Addis Ababa, Ethiopia: 2014.
[165] Hoddinott J, Berhane G and Kumar N. The Productive Safety Net Programme and the nutritional status of pre-school children in Ethiopia. *Unpublished*. Addis Ababa, Ethiopia: 2014.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.1: Improved nutritional status of children 0-24 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
7. Integrate ECCD stimulation with existing community & facility based child nutrition programmes						*Policy:* Early stimulation should be viewed as a component that involves multi-sectoral support *Supply:* Lack of standardized and coherent implementation at community level.	Policy background is ready: Early Childhood Care and Education (ECCE) Policy aligned with NNP was launched in 2010 by FMOH, MOE and MOWCYA.	Jamaica: Stimulation improved stunted children's development[166] and enhanced cognitive and educational outcomes[167] Ethiopia: a pilot project implemented under emergency context in SMMPR.[168]	

[166] Grantham- MacGregor SM, Powell CA, Walker SP and Himes JH. Nutritional supplementation, psychosocial stimulation, and mental development in stunted children: The Jamaican Study. *Lancet* 1991; 338: 1-5.
[167] Walker S, Chang S, Powell C and Grantham-McGregor S. Effects of early childhood psychosocial stimulation and nutritional supplementation on cognition and education in growth-stunted Jamaican children: prospective cohort study. Lancet 2005; 366: 1804-1807.
[168] Play Therapy Africa (PTA)'s 2008 pilot project in SNNPR saw children receiving early stimulation had faster weight gain and better cognitive and developmental outcomes. PTA (2009). Emotional Stimulation in the Context of Emergency Food Interventions, http://files.ennonline.net/attachments/1011/final-report-pta.pdf

Table {SO2 R2.2}: Result 2.2: Improved nutritional status of children 24-59 months

Result 2.2: Improved nutritional status of children 24-59 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
1. Promote appropriate dietary practices	1. iCCM/IMNCI	Assessment of and counselling on IYCF practices for sick children visiting health post or health centre.	Children 24-59 months of age	Full-scale implementation.	5 million children (5,011,332) iCCM services throughout the country since launch in 2011. Services are mainly for pneumonia, malaria, diarrhoea and SAM.	*Demand*: Low utilization of services. *Supply*: Stock out of drugs and supplies.	High FMOH and Partner support. Encouraging Quality of Care. Launch of community-based new born care.	JHU iCCM independent Evaluation ICCM routine monitoring database and analysis iCCM supplement	
	2. Community discussions	Discussions organized among community members, often focus on health and nutrition issues, including IYCF.	Every household in catchment area	Everywhere with the HDA 1 to 5 and 1 to 30 networks.	No data available on coverage or participation. HDA practices vary based on regional guidelines, motivation/skill of members, usual communication with community.[169]	*Demand:* Perceived benefit of discussion, and perceived quality of facilitator/leader. *Supply:* Discussion not limited to nutrition; quality/accuracy of messages delivered on nutrition unknown.	Undefined structure for community discussion currently, but potential for it to be integrated into the responsibilities of the HDA networks.	In areas with IYCF programming, 65% of community workers (mostly HDA/WDA) discussed IYCF in community meetings; improvement in complementary feeding practices was found.[170]	Previous modality of community conversations led by VCHWs, currently not clear structure or guidance on frequency, content or structure of discussions re: nutrition.
	3. M2M	Mothers groups are formed and facilitated by leaders to discuss IYCF.	Pregnant/lactating women, mothers of children 0-23 months.	DRS regions only. Initial pilot woredas: Afar: 4, Somali: 10, BG: 3, Gambella: 5.	No data available on coverage or participation; variable number of kebeles covered within woreda. Afar: 20 woredas (100 kebeles).	*Demand*: Livelihood needs prioritized (move for water, pasture). *Supply*: No IYCF tool being used for discussions; complementary food difficult due to limited food diversity; HEWs not able to monitor due to mobility; limited feedback from WoHo and RHB.	Provides viable platform for community IYCF (CIYCF) promotion and education; creates awareness for other health behaviours; members contribute money for emergency support and plan to use for income generation in future[171].	Behaviour change seen at community level, e.g. decrease in prelacteal feeds, increase in exclusive breastfeeding[172]. *Research questions*: What is the community behavioural change effect of M2M groups? What are the bottlenecks, barriers?	Materials must be provided in pictorial format and local language.

[169] Situation analysis woreda field visits.
[170] CFSN. Final report: Sentinel-site surveillance for Ethiopia infant and young child nutrition program: Third round survey. Center for Food Science and Nutrition, College of Natural Science, Addis Ababa University: 2014.
[171] Situation analysis woreda field visits.
[172] Situation analysis woreda field visits.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.2: Improved nutritional status of children 24-59 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
						Policy: Lack of monitoring mechanism.			
2. Prevent & control micronutrient deficiencies	1. Vitamin A supplementation (VAS) via EOS, CHD or routine delivery	Vitamin A capsules given twice annually (every six months) to reduce risk of mortality, VAD.	Children 24-59 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and Somali only CHD or HEP: dependent on timing of transition	Coverage data from NNP monitoring tool.	*Demand*: Perceived benefit; knowledge of when child is due (routine). *Supply*: Regular supply is needed for routine; HEWs must know when children need supplementation and be able to deliver service.	Transition to routine delivery successful only in woredas with 1) HEW records that monitor when children are due monthly and 2) HDA/WDA network functional in notifying caretakers that child is due.[173]	Vitamin A supplements should be provided in populations with elevated prevalence of deficiency[174]. *Research question*: What is the prevalence of VAD in Ethiopia? *Micronutrient Survey in process currently.	Need to assess readiness for transition to routine delivery; change in coverage in transition to routine delivery.
	2. Deworming (DW) via EOS, CHD or routine delivery	Deworming medication given twice annually (every six months) to reduce risk of anaemia.	Children 24-59 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and Somali only CHD or HEP: dependent on timing of transition	Coverage data from NNP monitoring tool.	*Demand*: Perceived benefit; knowledge of when child is due (routine). *Supply*: Regular supply is needed for routine; HEWs must know when children need supplementation and be able to deliver service.	Transition to routine delivery successful only in woredas with 1) HEW records that monitor when children are due monthly and 2) HDA/WDA network functional in notifying caretakers that child is due.[175]	WHO recommends deworming in populations with elevated presence of soil-transmitted helminths.	Need to assess readiness for transition to routine delivery; change in coverage in transition to routine delivery.
	3. Salt iodization	Universal iodization ensures salt supplied to all HHs is iodized.	Children 24-59 months of age	Universal.	16% of children 6-59 months of age living in households with iodized salt, of those tested (EDHS 2011).	*Demand*: Perceived benefit of using. *Supply*: Access to iodized salt; adequacy of iodization.		Salt iodization is an Essential Nutrition Action (ENA); less than 20% household access is indicator for iodine supplementation[176]. *Research question*: What are the barriers/bottlenecks to	16% of children 6-59 months of age living in households with iodized salt, of those tested (EDHS 2011).

[173] Situation analysis woreda field visits.
[174] WHO. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Geneva; World Health Organization (WHO): 2013.
[175] Situation analysis woreda field visits.
[176] WHO. Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. Geneva; World Health Organization (WHO): 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.2: Improved nutritional status of children 24-59 months									
Initiatives	**Implement ation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
								using iodized salt? Should supplementation (e.g. via MNPs) be considered until HH access improved?	
3. Early detection and management of acute malnutrition and common childhood infections	1. MUAC screening at EOS/CHD/routine services (HEP)	Early detection of SAM; referral for treatment as appropriate.	Children 24-59 months of age	Full-scale implementation. EOS: Developing Regional States (DRS) of Afar, Benishangul Gumuz, Gambela and Somali only CHD or HEP: dependent on timing of transition	Coverage data from NNP monitoring tool.	*Demand*; Dependent on coverage of EOS/CHD/routine services. *Supply*; Routine supplies.	Early identification of MAM/SAM is dependent on maintaining coverage in transition to routine delivery.	CMAM evaluation: From July-August 2011, 93.6% of under-5 children were screened via EOS/CHD (6 regions, 17 woredas)[177].	Potential for screening coverage to decrease with transition to routine delivery.
	2. CMAM: health post	Management of SAM at community level.	Children 24-59 months of age (uncomplicated SAM)	Full-scale implementation. *Select locations in DRS.	Data from NNP monitoring tool.	*Demand*: Caretakers' perceived benefit of service; workload; distance from HP. *Supply*: Quality of services; availability of CMAM at HP; routine supplies.	External CMAM monitors being phased out; opportunity to streamline data collection/use needs and build capacity of HEP workers.	Significant increase in services provided at HP level from 2008-2011[178]. *Research questions*: Of children screened, what proportion enters treatment? What are the barriers and bottlenecks to treatment?	If coverage of MUAC screening reduced in transition to routine delivery, identification and treatment of acute malnutrition will decrease. Equity concerns: Decreased coverage in Afar, Somali with lack of HEP; hotspots prioritized[179].
	3. CMAM: health centre	Management of SAM at facility level.	Children 24-59 months of age (complicated SAM)	Full-scale implementation. *Select locations in DRS.	Data from NNP monitoring tool.	*Demand*: Caretakers' perceived benefit of service; workload; distance from HC. *Supply*: Quality of	External CMAM monitors being phased out; opportunity to streamline data collection/use needs and build capacity of	Significant increase in services provided at HC level from 2008-2011[180]. *Research questions*: Of	If coverage of MUAC screening reduced in transition to routine delivery, identification and treatment of acute malnutrition will

[177] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[178] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[179] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[180] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.

Result 2.2: Improved nutritional status of children 24-59 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
						services; Availability of CMAM at HC; routine supplies.	HEP workers.	children screened, what proportion enters treatment? What are the barriers and bottlenecks to treatment?	decrease. Equity concerns: Decreased coverage in Afar, Somali with lack of HEP; hotspots (1/2) prioritized[181].
	4. iCCM/IMNCI : health post and health centre	Identification and management of diarrheal disease, acute malnutrition, IYCF practices.	Children 24-59 months of age.	Full-scale implementation.	5 million children (5,011,332) iCCM services throughout the country since launch in 2011. Services are mainly for pneumonia, malaria, diarrhoea and SAM.	*Demand*: Low utilization of services. *Supply*: Stock out of drugs and supplies.	High FMOH and Partner support. Encouraging Quality of Care. Launch of community-based new born care.	JHU iCCM independent Evaluation ICCM routine monitoring database and analysis iCCM supplement	
4. Ensure access and utilization of WASH practices	1. OneWASH	Delivery of rural and urban WASH services to communities, schools and health facilities.	*Safe water access*: 6.284 million households – 26.6 million persons (rural), 4.4 million persons (urban); 22,342 primary and 643 secondary schools; 7,772 HPs/HCs *Improved sanitation access*: 6.725 million households, 6,122 schools, 7,037 HPs/HCs with improved latrines	Full-scale implementation.	*Safe water access*: 67% of population. *Improved sanitation access*: 66% of population.	*Demand*: Perceived benefit of sanitation and hygiene services; cultural practices/norms; social acceptability. *Supply*: Drought sensitive areas, access to water source, advanced technology needed to tap source in certain locations.	Providing access to improved WASH services can be coupled with promotion for and education on appropriate behaviours for improving nutrition status.	National WASH Inventory as a baseline, annual sustainability audits and midline and endline reviews. Joint donor and government field reviews (annually).	Programme targets based on additional need to achieve GTP goals for access to safe water, critical hand washing and ODF communities.[182] Discrepancies in coverage of water and sanitation access exist based on data source used.

[181] FDRE and UNICEF. Evaluation of community management of acute malnutrition in Ethiopia. Addis Ababa; Federal Ministry of Health, Government of Ethiopia/UNICEF Country Programme 2007-2011: 2013.
[182] FDRE. One Wash National Program. A Multi-Sectoral SWAp. Program Document, Final. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia: 2013.

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Result 2.2: Improved nutritional status of children 24-59 months									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
	2. OneWASH Plus	Strengthened delivery of urban WASH services (community, schools, health facilities), linking water resources to WASH practices and increasing participation of women and children.	Water: 100,000 persons Sanitation: 250,000 persons	8 woredas in 4 regions: Amhara, Oromia, Tigray, Somali.		*Demand*: Perceived benefit of sanitation and hygiene services; cultural practices/norms; social acceptability. *Supply*: Drought sensitive areas, access to water source, advanced technology needed to tap source in certain locations.		Baseline conducted in 2014. Annual sustainability audits and midline and endline.	
	3. WASH/MUS /CBN	Linking WASH, MUS and CBN for improved food security; improved water supply in communities, schools, health facilities; access to and promotion of sanitation and hygiene.						No evidence. Baseline, mid-term and end-line evaluation in programme areas is planned to measure changes in diarrhoea and stunting among same households.[183]	
5. Integrate ECCD stimulation with existing community & facility based child nutrition programmes						*Policy:* Early stimulation should be viewed as a component that involves multi-sectoral support *Supply:* Lack of standardized and coherent implementation at community level.	Policy background is ready: Early Childhood Care and Education (ECCE) Policy aligned with NNP was launched in 2010 by FMOH, MOE and MOWCYA.	Jamaica: Stimulation improved stunted children's development[184] and enhanced cognitive and educational outcomes[185] Ethiopia: a pilot project implemented under emergency context in SNNPR.[186]	

[183] UNICEF (2014). Wet Nutrition: Multiple Use Systems for Water, Sanitation and Hygiene (WASH).
[184] Grantham- MacGregor SM, Powell CA, Walker SP and Himes JH. Nutritional supplementation, psychosocial stimulation, and mental development in stunted children: The Jamaican Study. *Lancet* 1991; 338: 1-5.
[185] Walker S, Chang S, Powell C and Grantham-McGregor S. Effects of early childhood psychosocial stimulation and nutritional supplementation on cognition and education in growth-stunted Jamaican children: prospective cohort study. Lancet 2005; 366: 1804-1807.
[186] Play Therapy Africa (PTA)'s 2008 pilot project in SNNPR saw children receiving early stimulation had faster weight gain and better cognitive and developmental outcomes. PTA (2009). Emotional Stimulation in the Context of Emergency Food Interventions, http://files.ennonline.net/attachments/1011/final-report-pta.pdf

Strategic Objective 2: Improve the nutritional status of infants, young children and children under-5

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

Table {SO4 R4.1}: Result 4.1: Strengthened implementation of nutrition sensitive interventions in the agriculture sector

Result 4.1 Strengthened implementation of nutrition sensitive interventions in the agriculture sector									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Increase production of fruits, vegetables, nutritious roots, cereals and pulses to improve the consumption of a diversified diet at household level.	1.Homestead gardening	Household members will have access to variety of vegetables and fruits from backyard for household consumption. Families with under-2 children will have access to fruits and vegetables for complementary food preparation.	Families with children 6-24 months PLW	Agrarian regions AGP woredas	Households with water source Households with capacity and interest	*Demand*: Households in areas where there is shortage of water, mothers' time and workload. *Supply*: Access to different seeds, watering support technology.	Model farmers support implementation. GoE plan for each kebele at least 1 crop and 1 irrigation (horticulture expert) DA.	Little evidence found globally on nutritional status improvement through homestead gardening. Research question Does gardening improve nutritional status of vulnerable group?	Nutrition sensitive homestead gardening needs to be accompanied with formative and operational research.
	2.Community gardening	Creating access to the households near by the community garden, nutrition demonstration using community garden.	Families with children under-2 PLW Youth group	AGP woredas Food insecure woredas for income diversification	Jobless youth	*Demand*: Market linkages. *Supply*: Seeds; Limited mostly to cabbage, potato, onion and tomato.	Local seed producers cooperatives	Evidence shows increased diet diversity at HH level also supports to improve the food group for complementary feeding for children [187]	Explore opportunities in AGP II for promoting community gardening through cooperatives Jon opportunity for youth in food insecure woredas

[187] Hirvonen K and Hoddinott J. Agricultural production and children's diets: Evidence from rural Ethiopia. ESSP II Working Paper 69. Washington, D.C. and Addis Ababa, Ethiopia: International Food Policy Research Institute (IFPRI) and Ethiopian Development Research Institute (EDRI): 2014.

	3.Urban gardening	Creating access for urban poor by promoting garden for fresh vegetable; micronutrient rich food access.	Urban poor households with interest; priority for households with children, PLW People living with HIV	Addis Ababa, Bahir Dar, Awassa, Dire Dawa	HH with limited space to grow vegetables and fruits, raise small animal	*Demand*: Technical training, labour force at household. *Supply*: Seeds, fertility of the soil (compost, fertilizer, water conservation).	Indigenous knowledge, learning by doing; training demonstration (Addis Ababa) Urban agriculture strategy Loan access	Research needed to learn the effect of urban gardening on nutritional status.	Public Private partnership, Pest management Post-harvest management to preserve micronutrients
	4.School gardening	Nutrition education and demonstration through school nutrition club, mini-media	School age children Teachers; community	139 Selected woredas in Amhara, Tigray Oromia, SNNPR and Afar (Asayita woreda)	Schools with gardening space and water source	*Demand*: Sustainable water and plot availability in schools, students' time. *Supply:* Quality of counselling.		Research Question School gardening and its effect on improving HH diet diversity and increase practice of homestead gardening	Promote nutrition education, promotion of adolescent girls nutrition Support school clubs with nutrition demonstration
2. Improve access to and utilization of animal source foods	1.Dairy	Access and appropriate utilization of milk and dairy products for complementary feeding; preparation and consumption by PLW as well as adolescent girls	Families with under-2 children, PLW	All milk belt areas Selected AGP woredas Selected food insecure woredas (some HH as Income Generating Activities)	Poorest HH with under-2 children Landless but with capacity and interest in dairy Jobless youth (organized as dairy cooperatives)	*Demand*: Fear of loan, market for selling. *Supply*: Animal feed, animal health services.	MOA's commitment for livestock including establishment of new state minister within MoA to promote livestock and livestock products	Milk Matters study has shown evidence access to dairy product improves nutritional status of children[188]	Explore the effect of Milk Matters approach on child nutrition in agro pastoralist communities.
	2.Poultry	Access to and consumption of eggs for children, PLW as well as adolescent girls	Families with under-2 children, PLW	All AGP woredas and selected HABP HH in chronically food insecure woredas	HABP beneficiaries Selected HH in AGP large scale production by the gov't and few HHs supported by different projects	Demand: Health care and feeding practice for poultry. Supply: Limited poultry multiplication centers; animal health and feed.	The government package of 50 poultry per selected HHs		Hygiene and sanitation in poultry producing HH Poultry feed, vaccines and health maintenance Promote better local laying hens
	3.Sheep and Goats	Meat and income from small animal rearing used for better dietary diversity at household level	Families with under-2 children		HABP beneficiaries Youth cooperatives as IGA	*Demand:* Market access. Supply: Animal feed, animal health.	Government policy and support Diversification of income	Research question Does income from small ruminant raring and fattening improve nutritional status of vulnerable groups	Research needed to understand if income is converted into nutrition needs.

[188] Sadler K and Catley A. Milk Matters: the role and value of milk in the diets of Somali pastoralist children in Liben and Shinile, Ethiopia. Medford, MA and Addis Ababa, Ethiopia: Feinstein International Center, Tufts University and Save the Children: 2009.

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

							Indigenous knowledge on animal rearing		

3. Increase Production and Consumption of Fish	4. Communities living around water bodies	Fish consumption by HH living around water bodies, Improves DD at HH level	Youth group	Bahir Dar Zuria, Dessie Zuria, Awassa Zuria, Arbaminch, Tekezie	Youth cooperatives	*Demand*: Market *Supply*: Cold chain, food safety management	Indigenous knowledge on fishery Technical support from research centers		Promotion of fish for HH consumption Promotion of fish for complementary food for children
	5. Community ponds construction for fish production	Cooking demonstration	Youth group Interested Community members Model farmers who have backyard for pond construction	Food insecure woredas AGP woredas	Farmers training center (FTCs) Youth group Model farmers	*Demand*: Market access. *Supply*: Cold chain, food safety management.	Water harvesting strategy of the Government Dam construction in different parts of the country		Promotion of fish for HH consumption. Promotion of fish for complementary food for children.
	6. Fishery sector in MoA	Promotion of fish production through Fishery sector in MoA	Regional Agriculture Bureaus, fish producer cooperatives	All regions		*Demand*: Technical assistance to fish producing cooperatives and associations. *Supply*: Capacity, staff.			Explore more fish producing sites including, newly constructed dams and pond construction

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

4.Promote appropriate technologies for food prod & processing handling, preparation & preservation for food divers to ensure nutritious food utilization	1.Preservation of fruit and vegetables Dairy Fish	Year round access to different kinds of foods Access to micronutrient rich food		AGP woredas in the four agrarian regions		*Demand*: Limited horticulture products. *Supply*: Capacity, technology.			Public private partnership Dairy and fish processing Fruit preservation
	2. Handling and transportation	Access to fresh and safe foods							Specially for fish handling and transportation from very hot areas (e.g. Tekezie dam)
5. Promote value addition to ensure availability & consumption of diverse nutritious foods	1. Bio-fortified micronutrient foods OFSP QPM	OFSP distributed for farmers in SNNPR and Tigray and some parts of Oromia primarily for HH consumption, excess for selling in the market	Farmers FTCs Schools	Selected woredas in Tigray, SNNPR, Oromia and Amhara		*Demand*: Test of OFSP is different from the non bio-fortified sweet potato *Supply*: Drought resistant seeds.			
		QPM seeds distributed to maize growing areas for farmers to grow for consumption and market.	Farmers	Amhara and Oromia AGP woredas					Formative Research needed
diversified foods through the AE program and DAs at	Pre-service training for DAs	Planning stage	DAs and DA trainers	National and all regions					Curriculum revision for DAs; training to include nutrition

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

	In-service training for AEWs and managers	Training provision to DAs	DAs and Farmers	Agrarian regions; 80 AGP woredas agro pastoralist and pastoralist woredas	DAs in Tigray, Amhara, Oromia and SNNPR	*Demand*: Workload and priorities. *Supply*: MoA's capacity to provide training.	Lack of harmonized training material for agriculture sectors		Harmonized, tailored nutrition training material for Agriculture Managers and DAs

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

Result 4.1: Strengthened implementation of nutrition sensitive interventions in the agriculture sector									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
7. Strengthen the capacity of the Ag sector to integrate nutrition sensitive intervention In to Ag programs	1. Nutrition unit in MoA	Promote and provide support on nutrition sensitive agriculture interventions		All regional bureaus will be supported by this unite to mainstream nutrition in the Agriculture sectors	MoA extension directorate established Food and Nutrition unite with 6 staffs	*Demand*: Priorities of sectors with in MoA. *Supply*: Staff.	Government leadership and commitment through the revised NNP; Nutrition sensitive PSNP and AGP II		Capacity development of agriculture staff at regional and woreda level
	2. FTC (Farmers Training Centers)	Demonstration of Gardening, dairy, poultry production and nutrition (Cooking) demonstration	Model farmers DAs	Full scale in few woredas but planned to scale up in all FTCs	Model farmers	*Demand:* *Supply:* Most FTCs with inadequate water source to produce vegetable during dry season	Government attention to improve and or establish FTCs in each kebele	In depth analysis of the potential of the woredas so as to promote appropriate and profitable fruit and vegetables	The current FTC training module needs revision to incorporate nutrition
	3. Policy & PIF	The inclusion of nutrition in the revised PSNP, AGP II and the PIF revision.		National		*Demand*: Correct indicator for MoA *Supply*: Lack of evidence Appropriate resource to document and communicate evidence	Government commitment to end hunger and malnutrition by 2025		Inclusion of nutrition objectives and outcome indicators in AGP II (e.g. HH dietary diversity as indicator)
8. Support Local CF Production & create economic opportunities for women through development group and support cooperatives	1. Complementary food producer women's group	Mother of under-2 children PLW	Children 6-59 months of age	20 woredas in agrarian regions	Children under-2 living in the targeted kebeles of these 20 woredas	*Demand*: Work load of mothers *Supply*: Food safety	CBN and GMP Women's Development Army	Formative research to understand the effect on child nutritional status	Rural Model, workload increase among mothers Avoid negative effects on maternal nutrition
	2. Document and scale up	Documentation of evidence and implementation modality	Implementing Partners			Implementation just began		Formative research to understand the effect on child nutritional status	Need to attach research to the CF production

Result 4.1: Strengthened implementation of nutrition sensitive interventions in the agriculture sector									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges**	**Opportunities**	**Evidence (evaluations and future research questions)**	**Special considerations**
9. Support Ag research centers to develop seeds of high nutritional	1. Research	Creating access to nutritious seeds	Farmers in AGP and chronically food insecure areas	Selected FTCs in the country					Equal attention to produce nutritious seeds Revision of Ethiopian food composition table
	2. Identify and adapt new seeds.	Creating access to nutritious seeds	Farmers in AGP and chronically food insecure areas	Selected FTCs in the country					Continuous research needed

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

Table {SO4 R4.2}: Result 4.2: Strengthened implementation of nutrition sensitive interventions in the education sector

Result 4:2 Strengthened implementation of nutrition sensitive interventions in the education sector									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Promote key nutrition actions through teachers, parent-teacher associations (PTAs) and school clubs	1.Teachers	MoE and BoE staff will be provided ToT on SHN based on the strategy, then they will provide training to teachers for provision of basic school health and nutrition to students	Federal MoE and BoE at regional level staff	Agrarian regions and 2 pastoralist regions (Afar and Somali) 173 woredas	ToT provided to regional level staff in Amhara, Tigray, Oromia SNNPR, Afar and Somali on School Health and Nutrition strategy	*Demand*: Competitive priorities (quality education packages) *Supply*: Guidelines to implement the school health and nutrition strategy	SHN strategy, NNP Child friendly school initiatives	Does better nutrition understanding by teachers help to improve nutrition practices amongst school communities? Nutrition knowledge of teachers affecting school curriculum?	Capacity building support for nutrition to MoE staff at all levels
	2.Parent Teacher Association	The association in each school provides overall guidance to different clubs in school to integrate nutrition into club activities	Associations in targeted schools in within targeted regions	Agrarian regions and 2 pastoralist regions (Afar and Somali) 173 woredas	Community participatory training and school planning training provided to woreda boards and school directors	*Demand*: *Supply*: Specific guidance needed.	Each school has PTAs hence an opportunity to expand capacity building activities for school nutrition		Capacity building support for nutrition to MoE staff at all levels
	3.School clubs	Nutrition education and demonstration through school nutrition clubs, mini-media	School age children Teachers Community	All schools have HIV, environment and girls clubs in Ethiopia Nutrition club is supported in schools of 173 woredas	Schools with health and nutrition clubs, science clubs in the above mentioned targeted woredas	*Demand*: Competitive priorities (quality education packages), too many clubs in one school *Supply:* Quality of the nutrition messages	Existence of science club in schools which can be used also for nutrition promotion NNP focal person is school feeding focal point	Function of clubs role and responsibilities to implement effective nutrition activities at ground level through school club	Support needed On SHNS Guidance (how to operationalize the school health and nutrition strategy, Scale and effectiveness of school clubs,

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

2. Encourage schools to pro & transfer sustainable & replicable school gardening models at community level	1.School garden	School gardening for demonstration and skill transfer teaching methods, Students expected to practice backyard gardening at household level Promote vegetable growing to improve dietary diversity	Students in the targeted schools, teachers, parents, school club members, etc.	56 woredas in Amhara, Tigray SNNPR, Oromia and Afar 11 schools in Amhara and Tigray contributed for 3 months of school feeding	Local planning capacity assessment done in all targeted schools Schools in Amhara and Tigray provided 3 months school feeding program from vegetable garden	*Demand:* Students' time *Supply*: sustainable water and plot availability in schools,	Child friendly school approach has school gardening component (as center of excellence) Community participatory approach tool integration Teacher learning	Does school gardening help to practice homestead gardening? Does school gardening help dietary diversity?	Agro ecologic specific school gardening tool reference materials Focus on nutrition sensitive gardening but not labour intensive for students Expertise needed for proper school gardening Better coordination with national home grown school feeding program
targeted micronutrient distribution, such as provision of de-worming tablets, at school	1. School-based deworming.	Implementation has not begun.		Plan for 82 woredas, still under discussion.		Policy: SHN strategy in place.	SHN includes deworming as service to be provided.	*Research question*: What is the appropriate strategy for school age children?	1. School-based deworming.
4. Improve water, hygiene & sanitation facilities in schools	Water supply to schools	Construction and rehabilitation of water points in schools School latrine construction for boys and girls Hand washing facilities in schools Roof water harvesting Supplying Water purification chemicals	Students and teachers in project targeted schools	Amhara, Tigray, Oromia, SNNPR, Afar and Somali regions	Schools in project targeted areas in Amhara, Tigray, Oromia, SNNPR Afar and Somali regions	*Demand*: *Supply*: Accessibility of water, resource for water point development and construction	Government plan for safe and potable water supply		Mapping of water source and documentation of water table Technology assistance Maintenance and management of water points for better sustainability of use Water point

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

5. Promote the use of Iodized salt at HH through school children	Iodized salt	Promotion of micro-nutrients through school clubs and other platforms	Students, teachers and PTAs	SNNPR, Amhara, Oromia, Tigray, Afar and Somali regions	Schools running school feeding program Schools with Health and nutrition clubs		Salt iodization legislation		Access to iodized salt
6. Incorporate nutrition into school curricula at primary & secondary levels, TVETs & higher learning institutions	Planning stage								Continuous advocacy and negotiation on the importance of nutrition education at different levels
7. Build the capacity of teachers, teachers' associations PTA on nutrition and food security	Improving capacity of Teachers, teachers association and PTAs	The association in each school provides overall guidance to different clubs in school to integrate nutrition in the club activities	Associations in targeted schools in the targeted regions	Amhara, Tigary, SNNPR, Oromia, Afar and Somali regions	Community participatory training and school planning training provided to woreda boards and school directors	*Demand*: *Supply*: Specific guidelines	Each school has PTAs hence an opportunity to expand capacity building activities on school nutrition		As staff turnover is common in rural schools need to support capacity building activities
8.Support and promote home-grown school feeding in selected schools	Home Grown School Feeding Program	Local farmers and cooperatives supported to produced nutritious foods to supply for school feeding program	All schools in hotspot woredas	SNNPR, Oromia, Amhara and Tigray regions to pilot home grown school feeding programs 105 schools	105 Schools in SNNPR	*Demand*: Resource to run school feeding national program *Supply*: Capacity on nutrition implementation; national school feeding budget	Oromia and Tigray have shown interest and developed plan to run home grown school feeding program from the government budget		School National school feeding program strategy development feeding in social protection and NNP Technical committee

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

institution to conduct nutrition sensitive opreational	No information								Operational research at project level ongoing
10. Support higher institutions to produce nutrition professionals	No information								Few projects support nutrition related researches by masters students in different universities in Ethiopia
11. Promote girls education	Girls club	Girls clubs to support and encourage girls enrolment Performance-based incentives Provision of take home ration in Afar	School girls School age girls in the community	Afar, Somali, Amhara, Oromia, SNNPR and Tigray regions	Girls club in targeted schools Girls in Afar Regions	*Demand*: Household work load *Supply*: Resource Capacity	Gender equality polices Government policy on universal access to education		Special attention to higher and secondary education students
12. Promote awarness of gender equality among school children.	School clubs	Girls club in schools promotes Gender education Early marriage	School girls Teachers PTAs	Afar, Somali, Amhara, Oromia SNNPR and Tigray	Schools in targeted woredas		Gender equality strategy		This an opportunity to mainstream nutrition messages including adolescent nutrition

Strategic Objective 4: Strengthen implementation of nutrition sensitive interventions across sectors

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Table {SO5 R5.1}: Result 5.1: Community level nutrition implementation capacity of the development army improved

Result 5.1: Community level nutrition implementation capacity of the development army improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Improve the capacity of primary health care units (PHCUs) and HDAs to implement gender responsive nutrition units	1. Integrated Refresher Training (IRT) for health staff	Primary method of training nurses, HWs and HEWs in health and nutrition.	Nurses, HWs and HEWs.	Full-scale implementation. *Only among settled populations in pastoralist areas.		*Demand*: *Supply*: Includes all health training, not limited to nutrition; quality of training unknown.	Importance of nutrition recognized, need advocacy for increased nutrition training within IRT.	No evidence.	Training and materials must be adapted for appropriate capacities and contexts (e.g. pastoralist communities).
	2. Supportive supervision (SS) for health staff	Method of monthly follow up for nurses, HWs and HEWs to assess implementation of health and nutrition activities.	Nurses, HWs and HEWs.	Full-scale implementation. *Only among settled populations in pastoralist areas.		*Demand*: Staff unaware of importance of and/or requirement for SS. *Supply*: Quality of SS variable, dependent on knowledge of supervisor; difficulty reaching HPs and HCs[189].	Monthly SS is currently policy, can be used as method for improving nutrition supervision, adapted for improved quality. Improving quality of supervision and community monitoring through HDA networks can lead to improved performance outcomes (see evidence).	Improvement in performance and outcomes seen with quality of supervision, supportive approach, community monitoring and problem solving. SS opportunities are group supervision (by supervisor and peers) and community supervision (joint action and monitoring plan based on performance). SS must be context specific and rooted in the community[190].	Gender responsive units may require adaptation of current materials.
	3. IEC/SBCC	Materials produced are to be used by health workers for delivery of health and nutrition messages at community level.	Nurses, HWs and HEWs (for use).	Full-scale implementation.		*Demand*: Staff unaware of need for messages targeting community behaviours. *Supply*: Messages/materials must be appropriate for level of	IEC/SBCC is in the process of being developed; opportunity to make gender responsive.		Pictorial messages most appropriate when new behaviours are being introduced.

[189] Situation analysis woreda field visits.

[190] Hill Z. et al. Supervising community health workers in low-income countries – a review of impact and implementation issues. *Global Health Action* 2014, 7: 24085 http://dx.doi.org/10.3402/gha.v7.24085.

Result 5.1: Community level nutrition implementation capacity of the development army improved									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
						understanding, language, etc.			
2. Strengthen the community level linkage between HEWs, teachers and development armies.	1. NNP coordination committee.	Provides platform for political leaders at woreda and kebele levels to discuss nutrition issues.	Woreda and kebele administration, sector heads.			*Demand*: Sectors and administrators with variable levels nutrition awareness, readiness to work multisectorally. *Supply*: Committees not yet formed at all levels in all geographic locations (training incomplete).	Improving coordination and work among political leaders could translate to better multisectoral work at community level; provide working guidelines.		At kebele level, use kebele administration committee rather than forming separate NNP committees.
	2. NNP technical committee.	Provides platform for nutrition focal persons from each sector at woreda and kebele levels to discuss nutrition issues.	Woreda and kebele nutrition focal persons from all sectors.			*Demand*: Sectors with variable levels nutrition awareness, readiness to work multisectorally. *Supply*: Committees not yet formed at all levels in all geographical areas (training incomplete).	Improving technical capacity for nutrition in all sectors could strengthen multi sectoral implementation; provide working guidelines.		At kebele level, use kebele administration committee rather than forming separate NNP committees.

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Table {SO5 R5.2}: Result 5.2 Strengthened capacity of women based structures and associations at all levels for NNP implementation

Result 5.2: Strengthened capacity of women based structures and associations at all levels for NNP implementation									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Strengthen the capacity of women based structures and associations at all levels to promote optimal maternal, infant and young child (MIYC) feeding and caring practices	1. NNP training for MoWCYA	Training increases nutrition capacity of sector responsible for interventions implemented through women based structures.	MoWCYA staff at federal, regional and woreda levels.			*Demand*: Staff with variable levels nutrition awareness, readiness to work multisectorally *Supply*: NNP training not yet rolled out to all levels in all geographical areas; quality of training as cascaded to lower levels.			
	2. Training and supervision of HDA/WDA and women farmers	Increases capacity of female community workers to promote appropriate practices.		Agrarian regions.		*Demand*: Motivation to have responsibility due to workload, cultural practices. *Supply*: Training/supervision at community level is informal; messages and materials broad, not adapted to community needs.	Formalized training and supervision could improve knowledge of appropriate practices and strengthen delivery of key messages.	No evidence.	Advocacy for training and supervision of HDA/WDA and women farmers to deliver MIYC messages should be undertaken, as the health sector is currently envisioning the way forward.
	3. Training and supervision of M2M support groups	Increases capacity of mothers to promote appropriate practices.		DRS.		*Demand*: Motivation to receive support depends on livelihood, need to perform work[191]. *Supply*: Variable quality due to HEW motivation, mobility, additional	M2M groups successful in raising awareness of and improving many health behaviours.	No evidence.	

[191] Situation analysis woreda field visits.

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.2: Strengthened capacity of women based structures and associations at all levels for NNP implementation									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
						responsibilities.			
	4. IEC/SBCC	Provide consistent, appropriate messages for delivery to community.		Full-scale implementation.		*Demand*: Women's groups unaware of need for messages targeting community behaviours. *Supply*: Messages/materials must be appropriate for level of understanding, language, etc.			Pictorial messages most appropriate when new behaviours are being introduced.
2. Prevent harmful traditional practices	1. HDA/WDA	Women's groups discuss traditional practices with negative effect on nutrition.		Agrarian regions.		*Demand*: Must believe traditional practices are harmful *Supply*:			
	2. M2M support groups	Mothers' groups discuss traditional practices with negative effect on nutrition.		DRS only.					
	3. IEC/SBCC	Messages provided to raise community awareness and discourage practices harmful to nutrition.							

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.2: Strengthened capacity of women based structures and associations at all levels for NNP implementation									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
3. Promote the development of life skills (such as assertiveness, negotiating, decision-making, leadership and bargaining) for girls	1.Adolescent Nutrition: school (girls) and community clubs	KAP assessment done, promotion of basic nutrition and improved nutrition for adolescent girls ongoing	Adolescent girls of age 15-19 both in and out of school	10 Woredas (80 Kebeles) in Amhara and Oromia regions	Report from IP	*Supply*: Multisectoral collaboration has begun within partner organizations – needs to be extended to Government ministries for cohesive intervention. *Demand*: Low perceived benefits, social and gender norms.	SHR strategy endorsed. WDA already in place, could have defined role in development of life skills among adolescent girls and boys.	Baseline report	

Table {SO5 R5.3}: Result 5.3: Improved capacity to conduct nutrition monitoring and evaluation as well as operations research

Result 5.3: Improved capacity to conduct nutrition monitoring and evaluation as well as operations research									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Strengthen the capacity of nutrition laboratories	Not assessed.								

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.3: Improved capacity to conduct nutrition monitoring and evaluation as well as operations research									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
2. Provide training on nutrition monitoring and evaluation (including nutrition assessments, surveys and early warning, gender and nutrition) for staff across sectors	1. NNP cascade training.	Monitoring and evaluation of nutrition related activities is included in training.		Full-scale implementation.		*Demand*: Sector staff with lack of understanding of need for nutrition relevant M&E; variable resources to perform M&E. *Supply*: Training is basic, not fully adapted to each sector's needs and level of skill.	Training for M&E with limited implementation thus far, so can be improved upon and adapted for sector needs.		
3. Establish a triangulated database to allow monitoring of NNP process	1. NNP monitoring tool.	Serves as initial database for assessing implementation and outcomes of nutrition interventions.				*Demand*: Sectors must perceive need to triangulate data with other sectors and format in manner to allow. *Supply*: Resources for specific database required for triangulation; training on use of data.			NNP monitoring tool based in FMOH, sectors may not be willing to provide data based on health sector requests/guidelines.

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.3: Improved capacity to conduct nutrition monitoring and evaluation as well as operations research									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
4. Build the capacity of sectoral offices to undertake regular and structured review meetings to review the progress of NNP at all levels.	1. NNP cascade training.	Review of nutrition sensitive activities is included in training.		Full-scale implementation.		*Demand*: Sector staff with lack of understanding of need for nutrition relevant review meetings; variable resources to perform. *Supply*: Training is basic, not fully adapted to each sector's ability to assess progress.	Training for adequate review and implementation adjustment as needed with limited implementation thus far, so can be improved upon and adapted for sector needs.		
5. Strengthen the capacity of sectors and training and research institutions to undertake operational research (this includes engendering research on mainstreaming and conducting specific gender related research	Not assessed.								

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.3: Improved capacity to conduct nutrition monitoring and evaluation as well as operations research									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
6. Collect and analyse sex disaggregated data	1. NNP monitoring tool.	Database provides information on nutrition specific interventions that can be disaggregated by gender.				At federal level, data reported is not typically disaggregated by gender, despite lower level disaggregation.	Data is disaggregated by gender at community and woreda levels.	Research questions: Are nutrition interventions being implemented equitably re: gender? Do nutrition outcomes differ by gender?	Sectors other than health may not be collecting gender disaggregated data. HMIS guides data reporting and does not disaggregate by gender.

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Table {SO5 R5.4}: Result 5.4: Improved capacity of the regulatory body

Result 5.4: Improved capacity of the regulatory body									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Strengthen the regulatory system throughout the country	Not assessed.								

Table {SO5 R5.5}: Result 5.5: Improved multisectoral coordination

Result 5.5: Improved multisectoral coordination									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
1. Strengthen multisectoral coordination at all levels	1. NNP coordination committees.	Provides platform for political leaders at all levels to discuss nutrition issues.	Federal, regional, zonal, woreda and kebele administration, sector heads.	4 agrarian regions: Tigray, Amhara, SNNPR and Oromia. *Rollout varies by region.		*Demand*: Sectors and administrators with variable levels nutrition awareness, readiness to work multisectorally. *Supply*: Committees not yet formed at all levels in all geographic locations (training incomplete). Alignment among admin levels not consistent (lack of upper level support for woredas/kebeles).	NNP guidelines for multi sector nutrition implementation created; should be used in rollout to help in planning activities at all levels. Improving coordination and work among leaders could translate to better multisectoral work at community level and convergence of nutrition related interventions.		

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.5: Improved multisectoral coordination									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
	2. NNP technical committees.	Provides platform for nutrition focal persons from each sector at all levels to discuss nutrition issues.	Federal, regional, zonal, woreda and kebele nutrition focal persons from all sectors.	4 agrarian regions: Tigray, Amhara, SNNPR and Oromia. *Rollout varies by region.		*Demand*: Sectors with variable levels nutrition awareness, readiness to work multisectorally. *Supply*: Committees not yet formed at all levels in all geographical areas (training incomplete). Alignment among admin levels not consistent (lack of upper level support for woredas/kebeles).	NNP guidelines for multi sector nutrition implementation created; should be used in rollout to help in planning activities at all levels. Improving technical capacity for nutrition in all sectors could strengthen linkages and multi sectoral implementation.		
2. Improve the capacity of NNP-implementing sectors	1. NNP coordination and technical committees.	Provides platform for nutrition focal persons from each sector at all levels to discuss nutrition issues and share knowledge and experiences.	Federal, regional, zonal, woreda and kebele administrative officials and nutrition focal persons from all sectors.	4 agrarian regions: Tigray, Amhara, SNNPR and Oromia. *Rollout varies by region.		*Demand*: Sectors with variable levels nutrition awareness, readiness to work multisectorally. *Supply*: Committees not yet formed at all levels in all geographical areas (training incomplete); sector capacity variable. Alignment among admin levels not consistent (lack of upper level support for woredas/kebeles).	NNP guidelines for multi sector nutrition implementation created; should be used in rollout to help in planning activities at all levels. Improving capacity for nutrition in all sectors could strengthen linkages and multi sectoral implementation.		High turnover of staff requires continuous advocacy and education.

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Table {SO5 R5.6}: Improved capacity of media

Result 5.6: Improved capacity of media									
Initiatives	Implementation modality / mechanism	How modality / mechanism contributes to initiative	Target population (who is targeted?)	Geographic Coverage	Who is being reached?	Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)	Opportunities (existing or future factors that can make the initiative more effective or efficient)	Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)	Special considerations
1. Build the capacity of national and regional media personnel (journalists, editors)	Not assessed.								
2. Equip media with appropriate nutrition SBCC materials and pragmatic tools to promote positive nutrition practices	Not assessed.								
3. Protect the public from media based community pressures (advertisements) that are against optimal nutrition practices	Not assessed.								

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation

Result 5.6: Improved capacity of media									
Initiatives	**Implementation modality / mechanism**	**How modality / mechanism contributes to initiative**	**Target population (who is targeted?)**	**Geographic Coverage**	**Who is being reached?**	**Implementation Challenges (at policy, supply (footnote for more specific guidance to avoid confusion) and demand levels)**	**Opportunities (existing or future factors that can make the initiative more effective or efficient)**	**Evidence (do evaluations, studies, reports exist and what are (research) questions that require answering)**	**Special considerations**
4. Provide media based opportunities for open dialogue between the general public and nutrition professionals	Not assessed.								

Strategic Objective 5: Improve multisectoral coordination and capacity to ensure NNP implementation