

## PROJECT PERFORMANCE ASSESSMENT REPORT



# Nutrition Project

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**Report No.: 136172** 

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## **ETHIOPIA**

NUTRITION PROJECT (IDA-H3760)

June 26, 2019

# **Currency Equivalents (annual averages)**

Currency Unit = Ethiopian Birr (Br)

2008	\$1.00	Br 9.51
2009	\$1.00	Br 11.77
2010	\$1.00	Br 14.40
2011	\$1.00	Br 16.89
2012	\$1.00	Br 17.70
2013	\$1.00	Br 18.62
2014	\$1.00	Br 19.58

## **Abbreviations**

BMI body mass index

CBN community-based nutrition
CPS Country Partnership Strategy

EDHS Ethiopia Demographic and Health Survey

FMOH Federal Ministry of Health GDP gross domestic product HEW health extension workers

ICR Implementation Completion and Results Report

IDA International Development Association

IEG Independent Evaluation Group NNP National Nutrition Program PAD project appraisal document

PPAR Project Performance Assessment Report

SDR special drawing rights

SNNPR Southern Nations, Nationalities, and Peoples' Region

UNICEF United Nations Children's Fund

USAID U.S. Agency for International Development

WHO World Health Organization

All dollar amounts are U.S. dollars unless otherwise indicated.

## **Fiscal Year**

Government: July 8-July 7

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This report was prepared by Mercedes Vellez and Salim Habayeb, who assessed the project in February 2019. The report was peer reviewed by Denise Vaillancourt and panel reviewed by Soniya Carvalho. Aline Dukuze provided administrative support.

# **Preface**

This is a Project Performance Assessment Report (PPAR) by the Independent Evaluation Group (IEG) of the World Bank Group on the Ethiopia Nutrition Project (P106228). The project was chosen for a PPAR pilot because of its potential for learning, and to better understand its contribution to nutrition improvement efforts and their sustainability in Ethiopia. The PPAR findings, moreover, could be used to inform future IEG evaluations in the nutrition sector.

The project was approved on April 4, 2008, and closed six years later on May 31, 2014, after a four-month extension to complete project activities. Total project expenditure was \$26.73 million, financed by an IDA grant in the amount of special drawing rights 18.8 million (equivalent to \$30 million at appraisal). Large exchange rate fluctuations were noted by the Implementation and Completion Report (ICR). In addition to the grant, the government contributed the equivalent of \$9.60 million to the project.

The PPAR findings are based on a review of the World Bank's project documents; a review of academic and policy literature; analysis of secondary data; nutrition evaluations and health sector performance reports; and interviews with relevant stakeholders (see appendixes A and B). A mission to Ethiopia, undertaken by the IEG team from February 11 to February 21, 2019, included interviews with a range of central, regional, and *woreda*-level counterparts; stakeholders; and development partners. The mission also interacted with health extension workers and beneficiary mothers during site visits in Gobesaye Kebele (Oromia) and Haben Kebele (Tigray).

The IEG team expresses its great appreciation to Ms. Erika Marie Lutz, Senior Nutrition Specialist, and Frew Tekabe, Senior Nutrition Consultant, Agriculture Growth Program (previously a member of the World Bank project team) for their extensive support and for joining the visit to Tigray Region. IEG gratefully acknowledges all those who made time for interviews and who provided further relevant information and insights. IEG expresses its gratitude to H. E. Dr. Lia Tadesse, State Minister, Federal Ministry of Health, Government of Ethiopia, and other officials for valuable discussions; to Anne Margreth Bakilana, program leader for Human Development, for her insights; to Sitra Mustafa for her support in data collection and organization; and to the World Bank country office in Addis Ababa for the logistical and administrative support provided to the mission.

Following IEG standard procedures, a copy of the draft report was shared with relevant government officials and agencies for their review and feedback and no comments were received.

# Summary

## **Project Background and Description**

Although Ethiopia has achieved substantial progress in economic, social, and human development over the past decade, the ranking of its Human Development Index remains low. Malnutrition is widespread, and it lowers resistance to infections and affects the intellectual development of children and productivity among adults. The government highlights the importance of nutrition in its development plans and recognizes the role of nutrition to propel sustainable development. The determinants of malnutrition are multifaceted, and the roots of undernutrition that prevents healthy growth and development are numerous: poverty; disease; disempowerment; access to safe, nutritious, and diverse food; access to health care; low education levels; inadequate feeding and caregiving; unhealthy environments and hygiene practices; lack of water and sanitation; low levels of awareness about nutrition; and low use of micronutrients.

The government embarked on this project to address immediate and underlying causes of undernutrition in women and children, while also recognizing that the complexity of nutrition requires collective multisector efforts. Hence, the project also set the stage to facilitate nutrition-related schemes expected to evolve over time in other sectors by establishing a national coordinating mechanism. The project development objectives were "to improve child and maternal care behavior, and increase use of key micronutrients, To contribute to improving the nutritional status of vulnerable groups." Direct beneficiaries consisted of pregnant and lactating women, and under-five children in food insecure regions with high malnutrition rates. Project activities were carried out in 238 woredas (equivalent to districts) in four of the most populated regions of the country (Oromia, Amhara, SNNPR, and Tigray). The woredas were chosen based on their high malnutrition rates and food insecurity.

The theory of change was premised on the assumption that community-based nutrition (CBN) programs constitute an effective response to improve nutrition. CBN addresses the lack of micronutrients, inadequate infant feeding, and poor dietary practices, while targeting pregnant women and children at a critical age during which the most harmful impact of malnutrition may emerge. In turn, these would be reasonably expected to contribute to improving the nutritional status of these beneficiaries. Project interventions included advocacy and social mobilization, behavior change communications, interactive community conversations, provision of micronutrients, growth monitoring, promotion and counseling, treatment of severe malnutrition, basic health care, and deworming.

#### Results

The PPAR findings reflect a story of positive change that supported the achievement of intended objectives. The project provided a 55.8 million people with access to CBN services, exceeding its target of 44.1 million. Behavioral changes in nutrition practices and the use of key micronutrients, such as for exclusive breastfeeding, iron supplementation for pregnant women, and the uptake of vitamin A in children, improved. Use of iodized salt reached almost universal levels, and the availability and administration of zinc were facilitated by effective government policies. Several outcome targets were exceeded. Health statuses improved, notably for stunting and underweight in children. Results were sustained, and after the operation closed in 2014, the project's CBN model, which had been applied in 238 woredas under the project, was replicated in other woredas of the country, reaching 386 woredas in 2017. In the larger context, multisectoral engagements significantly increased, but they required more years to develop, as time was required to transform a remarkable federal government commitment and theoretical concepts into actual practice by various sectors. The project contributed to stimulating the mobilization of resources and augmentation of national nutrition efforts both in the health sector and other sectors.

The project's performance was satisfactory. The project objectives were and remain highly relevant to the World Bank's Country Partnership Strategy for Ethiopia and were aligned to the government's development strategies. Relevance of design was rated substantial because of moderate shortcomings. Project objectives were substantially achieved. CBN interventions were deemed to be cost-effective and with favorable returns. The efficiency with which the project was implemented was assessed as substantial. Bank performance was rated moderately satisfactory in view of moderate shortcomings in the quality at entry combined with a satisfactory quality of supervision. Government commitment was and remains high. Borrower performance was rated moderately satisfactory because of some shortcomings largely consisting of early implementation delays. Monitoring and evaluation were adequate overall, and this Project Performance Assessment Report referred to the region-specific demographic and health surveys to assess improvements in nutritional status.

The risk to development outcome is rated **moderate**. CBN interventions were integrated with regular health services, and were replicated and expanded to additional areas of the country. Outcomes were maintained after project completion. Although there are no major immediate threats to outcome sustainability, efforts need to be maintained in demand generation and health services quality. The project acted as a catalyst to augment support to nutrition. Incremental contributions continued to grow from both development partners and the government, aggregating at \$1.1 billion for 2016–20, plausibly due to both the project and the global nutrition movement. Government

commitment remains high and is underscored by its financial allocations, declarations, support to the Health Extension Program that embedded the project, and the inclusion of nutrition indicators in national development plans. In the foreseeable future, the current encouraging attention to various multisectoral nutrition initiatives should not inadvertently diminish the importance of direct interventions, such as CBN, which are critical to improve nutrition. However, according to a 2018 World Bank study, *Stunting Reduction in Sub-Saharan Africa*, Ethiopia would need to invest about \$220 million annually to scale up a package of nutrition-specific interventions over the next decade to meet its targets for stunting, wasting, anemia, and breastfeeding.

Nutrition outcomes slowly improved. At the time of this evaluation, steady progress was being made in improving malnutrition at the national level, although the pace of such progress is relatively slow to reach the desired long-term targets of the country. Respondents also noted that, although they were satisfied with current progress, major countrywide challenges remain, such as increased financing; delivery of CBN services through overburdened health extension workers; limitations in water supply, infrastructure, food supply and diversity; and social protection. Contributions, integrations, and value additions to nutrition-sensitive aspects of water, hygiene, and sanitation and irrigation schemes across projects call for concerted and continuous advocacy and lobbying efforts.

Table S.1. Project Ratings Summary

Indicator	ICR	ICR Review	PPAR
Outcomes	Satisfactory	Moderately satisfactory	Satisfactory
Risk to development	Moderate	Moderate	Moderate
M&E quality	Substantial	Substantial	Substantial
Bank performance	Moderately satisfactory	Moderately satisfactory	Moderately satisfactory
Borrower performance	Moderately satisfactory	Moderately satisfactory	Moderately satisfactory

*Note*: ICR = Implementation Completion and Results Report; M&E quality = quality of monitoring and evaluation; PPAR = Project Performance Assessment Report.

## What Worked, and Why?

Rather than establishing a new delivery infrastructure, the project efficiently built on the existing infrastructure and institutional arrangements in line with the decentralized administration structure of the government. By embedding its main activities into the existing Health Extension Program at the community level, the project increased the likelihood of effective implementation and peripheral reach. The project tapped into strong political commitment and was able to carry out a wide governmental and multipartner consultative process. The design focused on underprivileged areas and addressed immediate needs for behavioral changes and micronutrient use.

The project planned and adopted a phased incremental implementation, thus facilitating training, administrative support, and operational readiness. Behavior change improvements were facilitated by interactive approaches through "community conversations," fitness with local settings, and improved counseling skills. Supportive government policies for micronutrients, notably universal salt iodization and zinc administration, contributed to the attainment of related objectives.

## What Didn't Work, and Why?

Initial guidance on mechanisms that steer multisectoral collaboration was lacking, but this was subsequently rectified. Initially, various sectors needed prompting and concrete guidance in multisectoral collaboration, workplans, and budgets to mainstream nutrition into their own sectoral plans. Evidence from studies in Ethiopia and comments from interviewees indicated that challenges to multisector work were at a rather basic level involving resources, budgetary arrangements, and know-how. These challenges are applicable to the initial project years till 2012, as multisectoral initiatives started to increase during the last year of the project (2013–14) and the postproject period (2015–19), facilitated by concrete guidance and advocacy through the collective efforts of the revised National Nutrition Program (2013–15), the project, the National Nutrition Coordinating Body, and the second National Nutrition Program (2016–20). Variable levels of human resource skills and logistical support from regional health bureaus resulted in fluctuations in the quality of health services provided.

#### Lessons

- The use of interactive approaches at the community level can facilitate behavior change. While maintaining traditional communication modalities, the project also adopted a more interactive approach with community conversations, in which people are encouraged to "ask, analyze, and act" under what is called the triple-A approach derived from a United Nations Children's Fund concept to assess the problem, analyze its causes, and take actions. The project prepared HEWs for this role through phased training, including higher counseling skills. Behavior change activities were well planned and linked with community mapping and participatory assessments. Nonhealth aspects of malnutrition were also covered. Many mothers who have seen positive results with their children shared their experience with other mothers, household members, and other influencers in the community, thus further disseminating nutrition knowledge in the community.
- In very poor communities, CBN needs to complement behavior change interventions with income support to achieve the desired goals fully because behavior change also depends on the means to keep or to buy healthful and

**nutritionally rich food.** Mothers can apply food diversity practices as counseled by CBN if they have the means to do so. This would contribute to mothers' participation in CBN and adherence to growth monitoring sessions. Poverty often creates food insecurity that prevents access to sufficient, safe, and nutritious food to meet basic dietary needs, resulting in severe vulnerability to both physical well-being and mental health.

- Favorable institutional conditions, programmatic arrangements, and incentives facilitate the unfolding of multisectoral engagement. The project sought to advance multisectoral collaboration, but substantial engagement was visible only after several years because time was required for the actual buildup of nutrition efforts as an integral part of mainstream responsibilities in various sectors. In this sense, the Ethiopia experience shows that evaluations need sufficient time to pass for a plausible impact to have occurred, as noted in IEG's findings in World Bank (2010). This lesson is also in consonance with USAID's lessons learned 2013–15 from the Ethiopia Multisectoral National Nutrition Program indicating that the multisectoral approach requires patience, time, and continuous engagement, and that it requires incentives related to budget, capacity, and accountability.
- Integration of nutrition operations with an existing and institutionalized service delivery mechanism at the community level facilitates CBN implementation. The project embedded its community interventions and micronutrient supplementation within the existing Health Extension Program, thus promoting its efficiency and community reach.
- External collaboration with development partners, under government leadership, catalyzes international expertise and good practices that benefit and reinforce government policy and its nutrition agenda. Both the project and the national program led by the government benefited from such collaboration, which facilitated sharing lessons learned from international experience. Additionally, joint monitoring missions with the government and development partners provided a platform to maintain ongoing dialogue and collaboration.

Sophie Sirtaine Acting Director Human Development and Economic Management Independent Evaluation Group

# 1. Background and Context

- 1.1 Ethiopia has achieved substantial progress in economic, social, and human development over the past decade. Real gross domestic product (GDP) growth averaged 10.5 percent between 2004 and 2016, according to the FY18–22 Country Partnership Framework, which also indicated that recent growth acceleration was accompanied by a notable decline in poverty rates from 55.3 percent in 2000 to 33.5 percent in 2011, based on \$1.90 per day (World Bank 2017).
- 1.2 Despite this progress, Ethiopia remains among the world's poorest countries with a per capita income of \$660 in 2016. As articulated in its Second Growth and Transformation Plan, Ethiopia seeks to attain lower-middle-income status by 2025 and follow a growth path that is more broadly inclusive and sustainable. The population was estimated at 102.4 million people in 2016 (WHO 2019), and 80 percent of the population lives in rural areas. With an annual population growth rate of 2.5 percent, Ethiopia's population is estimated to reach 150 million by 2035 (World Bank 2017). Life expectancy rose from 52 to 65 years during the same period, with improvements in many human development indicators, but Ethiopia still ranked 174 of 188 in the Human Development Index (2015). Based on the World Development Indicators, total health expenditures per capita have increased steadily from \$5.4 in 2000 to \$13.4 in 2008, \$22.4 in 2014, and to \$27.5 in 2016. As a percentage of GDP, total health expenditures were consistently about 4.5 percent since 2000. However, government domestic expenditures remain low at an average of 1 percent of GDP during 2012–16, while private expenditures have soared over time to 57 percent of total health expenditures in 2016. Externals funds for the health sector account for 15 percent of total health expenditures in 2016. According to Ethiopia National Health Accounts (2017), nutrition accounted for 13 percent of spending.
- 1.3 Malnutrition indicators remain high in Ethiopia.¹ Before the project, the national prevalence of stunting among children under five was 51 percent; the underweight rate was 33 percent; and wasting was 12 percent, according to the Ethiopia Demographic and Health Survey (EDHS) 2005. These are the three measures of undernutrition according to the World Health Organization (WHO). A child is considered (i) stunted if his or her height-for-age is more than two standard deviations below the median height-for-age of the reference population; (ii) underweighted when his or her weight-for-age is more than two standard deviations from the median weight-for-age of the reference population; and (iii) wasted if weight-for-height is two standard deviations below the median weight-for-height of the reference population. Stunting is one of the main markers of protein-energy malnutrition and is usually irreversible after age two.

- Multiple factors affect nutrition outcomes. Poor breastfeeding practices 1.4 contribute to infant mortality, and much of the inappropriate breastfeeding behavior in Ethiopia results from lack of knowledge rather than other constraints; there is no evidence of a positive relationship between wealth and optimal breastfeeding behavior in the country. Child malnutrition is associated with maternal malnutrition and childbirth size. The children of mothers who are thin, with a body mass index (BMI) of less than 18.5, are more likely to be stunted, wasted, or underweighted than the children of mothers who have a normal BMI. Chronic energy deficiency is caused by eating too little or having an unbalanced diet that lacks adequate nutrients. Women of reproductive age are especially vulnerable to chronic energy deficiency and malnutrition, and chronic undernutrition among women is a major risk factor for adverse birth outcomes. Children who are smaller at birth are more likely to be stunted, wasted, or underweight than children who are normal or larger at birth. Moreover, the proportion of children undernourished declines with increasing mother's education and increasing household wealth.
- 1.5 There are several negative consequences of undernutrition and micronutrients deficiencies in the short and long terms. Malnutrition itself becomes an underlying cause of childhood deaths associated with infectious diseases in developing countries. Beyond the direct loss caused by mortality, malnourished survivors require additional health care, and a productivity loss arises from impaired cognitive development and stunted physical stature. Vitamin A deficiency damages a child's immune system and lowers resistance to common infections. Iodine deficiency disorder reduces the ability to learn, leads to high dropout rates in primary schools, and ultimately weakens the benefits of investments in education. Iron deficiency anemia has far-reaching effects on intellectual development and labor productivity among adults. Even mild zinc deficiency impedes growth and increases the risk of diarrheal and respiratory diseases, thus zinc therapy can reduce related morbidity and mortality. Although economic growth can help lift people out of poverty, inadequate health and nutrition have been closely linked to diminished individual cognitive ability, productivity, and labor market outcomes.
- 1.6 The economic costs of malnutrition are significant. In 2007, it was estimated that Ethiopia would lose approximately Br 144 billion (\$15.2 billion) during the period 2006–15, or about 10 percent of GDP, because of iron deficiency anemia, iodine deficiency disorder, and stunting alone (USAID 2007). In 2013, the African Union Commission and the government of Ethiopia conducted a study on the cost of hunger in Ethiopia. This study suggested that the annual cost of undernutrition was estimated at Br 55.5 billion, equivalent to 16.5 percent of GDP, and that the country could reduce losses by Br 148 billion by 2025 if underweight rates were reduced to 5 percent and stunting to 10 percent in children under five. It also found that reducing child undernutrition to only one-half the levels at the time of the study could reduce losses by Br 70.9 billion.

- 1.7 Multifaceted determinants of malnutrition have shifted the focus of nutrition policies. In the past, policy makers addressed food security as the primary means to confront malnutrition. Initiatives were focused on acute malnutrition and drought-related emergencies. Progressively, this narrow focus expanded with a growing understanding of the multidimensional and multisectoral characteristics of nutrition. The roots of undernutrition are many, and numerous determinants prevent healthy growth and development, including poverty and material deprivation, disease, access to safe and nutritious food, access to health care, education levels, inadequate breastfeeding and other feeding and caregiving practices, agriculture-related issues, unhealthy environments and hygiene practices, inadequate water supply, and sanitation. Analytical work undertaken by the World Bank in 2007 on malnutrition in Ethiopia indicated that although food security is only one important factor among multiple determinants, the focus on high-impact nutrition interventions delivered through the health sector is also important.
- Nutrition has progressively gained attention in Ethiopia's government strategies within the larger context of poverty alleviation. In 2005, the government launched a Plan for Accelerated and Sustained Development to End Poverty (PASDEP) 2005-10 that called for implementing a multisectoral nutrition strategy to achieve Millennium Development Goal 1 of halving poverty and hunger by 2015 (Ministry of Finance 2006). In 2008, it launched the first National Nutrition Program (NNP) that highlighted the importance of nutrition interventions that address the immediate causes of suboptimal growth and interventions that address underlying determinants of malnutrition. The revised NNP (2013–15) and the second NNP (2016–20) provided more specificity and concrete guidance in addressing multisectoral aspects of nutrition (FMOH 2016). The plans embodied the government's commitment to improving nutrition, and at the Third International Conference on Financing for Development in 2015, the government pledged through the Seqota Declaration to end child malnutrition by 2030 and recognized the role of nutrition to propel sustainable development.<sup>2</sup> Nutrition was integrated in the country's Health Sector Transformation Plan. The current National Growth and Transformation Plan II 2015–20 includes national nutrition indicators.

# **Project Context**

1.9 The Ethiopia Nutrition Project was the World Bank's first support to the government to assist its nutrition agenda. The project development objectives were "to improve child and maternal care behavior and increase utilization of key micronutrients, To contribute to improving the nutritional status of vulnerable groups" (World Bank 2008b).³ To deliver against these objectives, project activities were divided into two components. The first supported community-based nutrition (CBN) interventions consisting of behavior change communications, counseling, provision of micronutrients,

growth monitoring and promotion, treatment of malnourished children, and basic health care and deworming. The second component aimed at institutional strengthening, including human resource development, monitoring, operational research, and the establishment of a National Nutrition Coordinating Body to spur and coordinate future multisectoral programs. CBN was conducted incrementally in 238 woredas (equivalent to districts) with high malnutrition rates and food insecurity, within four of the most populated regions of the country: Amhara; Oromia; Southern Nations, Nationalities, and Peoples' Region (SNNPR); and Tigray.<sup>4,5</sup>

- 1.10 Responsibility for delivering the CBN changes overtime. During the project's first two years of implementation, health extension workers (HEWs) delivered CBN with complementary services of voluntary community health workers, who were trained to fill the gap for unmet health care needs and promotional activities. Considering broader community development needs, concerns about a fragmented approach to service delivery, and concerns about service quality, voluntary workers were no longer used after 2010 by government decision.<sup>6</sup> All health services consolidated in the mainstream system with regular staff. The government promoted the role of the voluntary Women Development Army, also referred to as Health Development Army, which is a voluntary and participatory engagement of women's groups for advocacy, social mobilization, and promotional activities within the community covering a wider scope of topics, such as sanitation and hygiene. They are not involved in clinical services provided by HEWs, but they provide a complementary role through advocacy and social mobilization. Health Development Army volunteer leaders are selected from model families. The Federal Ministry of Health (FMOH) intends to train about 3 million Health Development Army leaders (FMOH 2017). They are well regarded by both decision makers and communities. A senior regional health official even suggested to the Independent Evaluation Group (IEG) mission that a World Bank-supported operation could be considered to strengthen their future role.
- 1.11 According to IEG's reconstruction of the project's theory of change, activities were logically linked to expected outputs and outcomes. The theory of change was premised on the assumption that CBN programs constitute an effective response to improve nutrition because they deal with immediate causes of undernutrition (lack of micronutrients and inadequate feeding behavior) by targeting pregnant women and children with nutrition services at a critical age period during which the most harmful impact of malnutrition can occur. It was reasonable to expect that the provision of CBN services would increase access to micronutrients and enhance mothers' knowledge and skills in good nutrition practices, which would lead to improved nutrition behavior by mothers and increased use of key micronutrients, thus contributing to improving the nutritional status of targeted beneficiaries.

- 1.12 However, in food insecure contexts, the effective compliance of mothers toward appropriate food diversity practices as counseled by the program might be limited by the lack of basic resources to keep or buy healthful and nutritionally rich food. That said, the project was not meant to address all factors underlying nutrition outcomes that the theory would predict in a multisectoral way but rather anchor specific nutrition interventions within the community health services already provided. Considering limited project financing and the inability of the Ministry of Health to extend direct operations beyond its own mandate, the project strategy in establishing a multisectoral institutional body to kick off prospective multisectoral initiatives was a realistic approach. The project was always intended to be initial seed money to spur additional interventions and investments from other donors (World Bank 2015, 26).
- 1.13 Attribution is plausible for the proximal outcomes related to behavior change and micronutrient use, but for the nutrition status itself, only a contributory role can be claimed because of the large interplay of underlying determinants and contextual factors. The role of the World Bank–supported project in CBN was predominant among other nutrition-related projects and technical assistance programs supported by various agencies (World Bank 2008b, 28, supplemented with additional information) at the project launch, as follows:
  - Food Security Project supported by the Canadian International Development Agency, the U.K. Department for International Development, and the Italian Agency for Development Cooperation.
  - Productive Safety Net Program Adaptable Program Loan II supported by the International Development Association (IDA), the Canadian International Development Agency, Development Cooperation of Ireland, the U.K.
     Department for International Development, the European Commission, the World Food Programme, and the U.S. Agency for International Development (USAID).
  - Water Supply and Sanitation Project supported by IDA and the U.K. Department for International Development.
  - Enhanced Outreach Strategy for Child Survival supported by the United Nations Children's Fund (UNICEF) and the World Food Programme.
  - School Feeding Program supported by the World Food Programme.
  - CBN supported by UNICEF. Activities included measles vaccination, vitamin A supplementation, deworming, and nutritional screening. Coverage was difficult to ascertain in the context of a large technical assistance from UNICEF. The agency also bought 4,830 metric tons of ready-to-use therapeutic food

- (Plumpy'nut) to treat acute malnutrition for an estimated 200,000 children in Ethiopia (UNICEF 2008).
- Essential nutrition actions supported by USAID (2003–06) in collaboration with three regional health bureaus. The activity promoted a strategy that included seven essential nutrition actions. These are exclusive breastfeeding for children 0–6 months, adequate complementary feeding for children 6–24 months; adequate nutritional care of the sick and severely malnourished child, adequate nutrition for women, prevention of vitamin A deficiency for women and children, prevention of anemia, and prevention of iodine deficiency for all members of the household. Factors that inhibited institutionalization of this program included the lack of an approved National Nutrition Strategy, lack of indicators related to essential nutrition actions in the health management information system, and lack of regularly scheduled training courses on essential nutrition actions for new and continuing health professionals (Jennings and Hirbaye 2008).
- Multiple nongovernmental organizations active in various nutrition aspects at the local level.
- Government regular primary health care services.

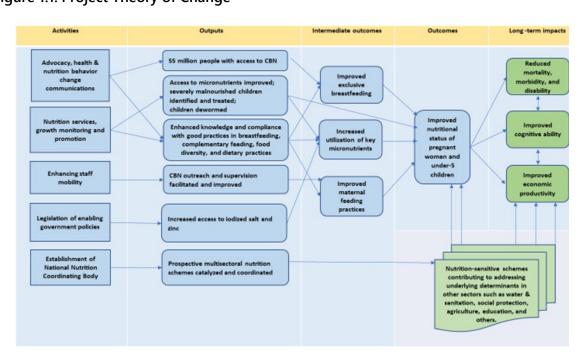


Figure 1.1. Project Theory of Change

Source: Independent Evaluation Group reconstructed theory of change of the project. Note: CBN = community-based nutrition.

1.14 The World Bank financed project activities through a \$30 million IDA grant (special drawing rights [SDR] 18.8 million). The total project expenditure was \$26.73. The ICR noted large exchange rate fluctuations between SDR and the U.S. dollar (see appendix C for basic project information; World Bank 2015, 38).

Table 1.1. World Bank Financing under the IDA Grant, by Component

Component	Appraisal Estimate (\$, millions)	Actual Cost (\$, millions)	Percentage of Appraisal
Supporting service delivery	14.00	12.20	87
Institutional strengthening and capacity building <sup>a</sup>	16.00	14.53	91
Total project cost <sup>b</sup>	30.00	26.73	89.1

Note: IDA = International Development Association.

## 2. Results

- 2.1 The Project Performance Assessment Report (PPAR) findings reflect a story of positive change that supported the achievement of intended objectives. The project provided 55.8 million people with access to CBN nutrition services, exceeding its target of 44.1 million. Behavioral changes in nutrition practices and in the use of key micronutrients improved, such as for exclusive breastfeeding, iron supplementation for pregnant women, and the uptake of vitamin A in children. Judicious government policy facilitated almost universal use of iodized salt and widespread availability of zinc for children. Several outcome targets were exceeded, and improvements in health status were seen, notably for stunting and underweight in children. Results were sustained, and the project's CBN model was replicated in other districts of the country (from 238 woredas under the project to 386 woredas in 2017). In the larger context, multisectoral engagements significantly increased, but they required more years to develop because time was needed to transform a remarkable federal government commitment and theoretical concepts into actual practice by various sectors (see the section Other Important Results).
- 2.2 The World Bank helped improve the availability of basic nutrition services. The main inputs and outputs, detailed in appendix D, included the following: advocacy, communications, counseling, community conversations, and enhanced knowledge and compliance with good practices in exclusive breastfeeding, complementary feeding, food diversity, and dietary practices; direct supply of nutrition commodities, including micronutrients (iron and folic acid) and anthropometric equipment. The project enhanced staff mobility, improved outreach services and supervision, improved skills

a. Communications for behavior change and substantial parts of human resources development directly related to the first component supporting service delivery.

b. The source of these data is the Operations Portal. Additional government contributions amounted to \$9.6 million equivalent, but were not included in the Implementation and Completion Results Report's tables.

with new training curricula, and supported long-term investments in nutrition capacity for trained woreda health officers to receive master's degrees in nutrition through sandwich training. The project's counseling activities were of utmost importance because lack of knowledge is one of the main causes underlying the conservative exclusive breastfeeding rates confirmed by HEWs. A 2018 systematic review and meta-analysis by Alebel et al. (2018), covering 32 Ethiopia studies, found that mothers who attended antenatal visits or who gave birth at a health institution were twice as likely to practice exclusive breastfeeding, illustrating the benefits of health education exposure and counseling.

- 2.3 Exclusive breastfeeding practices improved, and the target was exceeded in project woredas. A midcourse independent evaluation in CBN-specific woredas supported by UNICEF found significant changes in maternal and child nutrition feeding practices (White and Mason 2011). The percentage of infants age 0-6 months who were breastfed exclusively (for the first six months of life) increased from 66.6 percent in 2009 to 89 percent in 2011 in CBN woredas (based on the assessment of 54 woredas labeled as tranche 2 of CBN activities rolled out in 2009). Project-specific endline surveys were not completed because of supply issues within UNICEF, but EDHS national results were available. Exclusive breastfeeding at the national level increased consistently from 49 percent in 2005 to 52 percent in 2011, and 58 percent in 2016 (figure F.1). Despite the lack of recent disaggregated data, national averages can be used as proxies for project region data because CBN coverage was almost universal in Tigray, 92 percent in SNNPR, 80 percent in Amhara, and 58 percent in Oromia, which overall account for 80 percent of the total population in Ethiopia. The median duration of exclusive breastfeeding also increased across regions but remains low at slightly more than three months old (figure F.2).
- 2.4 Community-level data showed substantial improvements in dietary intake practices during the project life for mothers and children. The proportion of women eating less during pregnancy decreased from 64 percent in 2009 to 47 percent in 2011 in CBN tranche 2, and from 63 percent in 2009 to 55 percent in 2011 in CBN tranche 3 (White and Mason 2011). The share of children age 6–23 months who consume a minimal acceptable diet increased from 21.2 percent in 2009 to 43.4 percent in 2011 in CBN tranche 2, and from 27.6 percent in 2010 to 37.4 percent in 2011 in CBN tranche 3. In addition, there was a reduction in poor dietary practices: Caregivers who provided inadequate amounts of food to children who had diarrhea decreased from 55 percent in 2009 to 30 percent in 2011 in CBN tranche 2, and from 55 percent in 2009 to 28 percent in 2011 in tranche 3. Dietary diversity for under-two children in CBN tranche 2 also improved from 27.4 percent in 2009 to 49.7 percent in 2011 and from 31.9 percent in 2010 to 48.8 percent in 2011 in tranche 3.

- 2.5 Better feeding practices likely resulted from improved mothers' knowledge, including through interactive communication methods applied by the project, as discussed in section 3. The substantial CBN-specific rates noted by 2011 become diluted when considering regional data. Despite improvements in region-specific rates, minimum dietary diversity among children under two continue to be somewhat low: By 2016, less than 18 percent of children had an adequately diverse diet in former project regions (figure F.3). In Tigray, the rate does not exceed 14 percent, which may be linked to Bilal et al. (2014) conclusions that lack of basic resources to keep or buy healthful and nutritionally rich food was an important constraint, and more broadly that the link between improved knowledge and improved dietary diversity is conditioned on market access (Hirvonen et al. 2017).
- 2.6 Participation in growth monitoring exceeded the target under the project, but participation in growth monitoring remains relatively low in the country. The percentage of under-two children participating in monthly growth monitoring and promotion sessions increased from a baseline of zero (under project interventions) to 42 percent in 2014, exceeding the target of 40 percent. During health post visits, the IEG mission noticed that output data were duly registered, including for cured children with severe malnutrition and for those who were referred for treatment. The 2018 Nutrition Joint Review Mission Report of the Health Sustainable Development Goals Program (FMOH 2018) indicated further progress in growth monitoring, with a national average performance of 44 percent in 2018, up from 37 percent in the previous year 2017. The highest annual coverage was registered in three of the four project regions: Tigray (66 percent), SNNP (56 percent), and Amhara (51 percent).
- 2.7 The project contributed to increased consumption of key micronutrients by pregnant women. Use of iron supplementation among pregnant women in the project's CBN areas increased from 17 percent in 2009 to 89 percent in 2014, exceeding the target of 25 percent. Regarding national-level data, the National Mini-Demographic and Health Survey of 2014 (at project completion) showed a slower increase, from 15 percent in 2011 to 34 percent in 2014. Two years after project closing, EDHS 2016 data showed that 42 percent of women took iron tablets during their most recent pregnancy, which means that more than half of women in the country did not take any iron tablets during their most recent pregnancy, and only 5 percent of pregnant women took iron tablets for the recommended 90 days. Therefore, despite the project's notable progress in iron supplementation for pregnant women in project areas, the rates remain at a substandard level in the country as a whole.
- 2.8 Evidence on the intake of vitamin A in children under five is also positive but less consistent across data sources. The number of children age 6–59 months receiving a dose of vitamin A every six months increased from 10.2 million in 2008 to 12.3 million in

2014, exceeding the target of 11.3 million. Average rates of vitamin A intake remained stagnant at the national level (45 percent) both before and after the project (figure F.4). The project regions of Tigray and Amhara increased vitamin A use to 74 percent and 48 percent, respectively. However, the Oromia and SNNPR regions decreased vitamin A use (to 37 percent and 47 percent, respectively), suggesting less convincing project results. After project closing, vitamin A supplementation shifted from a campaign mode to routine service delivery, and the varying ability among woredas to implement this shift contributed to fluctuations and mixed recorded results. The 2018 Nutrition Joint Review Report of the Health Sustainable Development Goals Program (FMOH 2018) indicated continued progress in vitamin A delivery, reaching an average of 69 percent in woredas in nonemerging regions (better socioeconomic conditions) in 2018 (up from 48 percent in 2017) and 26 percent in woredas in emerging regions (lower socioeconomic conditions), up from 0 percent in 2017.

- 2.9 An increase in iodized salt production during the project period exceeded the intended results. Ninety percent of the national salt production by the private sector was iodized in 2014 compared with a baseline of 28 percent in 2000, exceeding the target of 50 percent. EDHS 2016 data showed that households using iodized salt in the four project regions increased from an average of 21 percent in 2005 to an average 89 percent in 2016 (figure F.5), an average similar to the national rate. The government mandated the iodization of salt for human consumption in February 2011 under its universal iodization policy. The household use pattern appears to be logical, and use rates are expected to be in line with market availability to the consumer through increased private sector production, which was quasi-universal. However, issues related to quality standards of iodization and incorrect dosage persist, notably at the level of small manufacturers with manual processes.
- 2.10 The project did not track specific nutritional health outcomes of pregnant women and children under five in target areas because these were conceived as higher-level objectives that are likely to be influenced by the project interventions but also by other factors. However, EDHS data show moderate declines in the share of women age 15–49 (not only pregnant) with a BMI below the normal range. The drawback of using the EDHS data is that the level of plausible improvements in pregnant women would have been diluted in the larger pool of all women of reproductive age. Figure F.6 shows that women's undernutrition declined in Tigray from 37.5 percent in 2005 to 34 percent in 2016, and in Amhara from 27 percent to 22.9 percent. It remained unchanged in Oromia at 24.7 percent and declined in SNNPR from 26.7 percent to 14.9 percent. Nationally, undernutrition declined from 27 percent in 2005 to 22 percent in 2016. The prevalence of anemia among women age 15–49 declined in Tigray from 29.3 percent in 2005 to 19.7 percent in 2016, in Amhara from 31 percent to 17.2 percent, and in SNNPR from 23.5 percent to 22.5, but it increased in Oromia from 24.9 percent to 27. 3 percent.

Nationally, anemia declined from 27 percent to 24 percent during the same period (figure F.7). Mild improvements in anemia among women age 15–49 does not reflect that the project was unsuccessful in supporting iron supplementation for pregnant women because better anemia results could be diluted in the data encompassing all women age 15–49.

- 2.11 Children's nutritional status showed improvements in each project region for the two main indicators: stunting and underweight. Stunting (height-for-age) reflects long-term chronic conditions resulting from suboptimal health and nutrition, and underweight (weight-for-age) reflects both chronicity and acute episodes. Findings from EDHS region-specific data show that stunting rates declined in the four project regions with high malnutrition as follows: Tigray from 41 percent in 2005 to 39.3 percent in 2016, Amhara from 56.6 percent to 46.3 percent, Oromia from 41 percent to 36.5 percent, and SNNPR from 51 percent to 38.6 percent. Stunting rates nationally declined from 51 percent to 38 percent (figure F.8).
- 2.12 Underweight rates in children under five declined sharply in project regions. EDHS data show that rates fell in Tigray from 41.9 percent in 2005 to 23 percent in 2016, in Amhara from 48.9 percent to 28.4 percent, in Oromia from 34.4 percent to 22.5 percent, and in SNNPR from 34.7 percent to 21.1 percent in 2016 (figure F.9). The decline in the national underweight rate was relatively moderate, from 33 percent in 2005 to 24 percent in 2016. Additionally, growth monitoring data in CBN woredas showed an improvement of 15 percentage points in underweight prevalence among participant children under two years old two years after CBN launch. UNICEF conducted an evaluation of the expanded CBN program that replicated the project approach between 2013–17 in sample *kebeles* (communitites) from 145 woredas where similar CBN interventions were scaled up in Oromia, SNNP, and Amhara (UNICEF 2018). Underweight decreased from a baseline of 22 percent in 2013 to 17 percent in 2017, and stunting decreased from 40 percent to 35 percent during the same period.
- 2.13 The third anthropometric measurement of child nutritional status, wasting (weight-for-height or thinness), is not a good measure of chronic malnutrition because it is influenced by recent episodes of severe disease or acute starvation.<sup>7</sup> It can change rapidly because the indicator is responsive to short-term influences and is highly susceptible to seasonal variations in food availability. Therefore, the wasting indicator is not recommended for evaluating change in anthropometric status in nonemergency situations (Measure Evaluation 2016).
- 2.14 At the time of this evaluation, steady progress was being made in improving malnutrition at the national level, though its pace could compromise Ethiopia's achievement of long-term targets. Stunting rates vary greatly between and within regions, and rates are still extremely high (above 40 percent) in some regions (Amhara,

for example). Respondents also noted that although they were reasonably satisfied with current progress, major countrywide challenges remain such as limitations in water supply, infrastructure, food supply and diversity, and social protection.

2.15 Regarding long-term impacts, improvements in maternal and child mortality were also reported nationally. Under-five mortality declined from 88 per 1,000 live births in 2011 to 67 in 2016, infant mortality from 59 in 2011 to 48 in 2016, and the maternal mortality ratio from 676 per 100,000 live births in 2011 to 412 in 2016. The nutrition determinant as such is linked to global health outcomes, and the combined effect of micronutrient deficiencies and underweight is an integral part of the global disease burden. One-third of child deaths worldwide are attributable to undernutrition, according to the Global Nutrition Policy Review (WHO 2013). However, because nutrition is only one of many determinants of such mortality, the project's plausible contributions to mortality can only be partial.

## **Other Important Results**

- 2.16 The project raised awareness of the nutrition agenda. In the context of a global nutrition movement, multisectoral initiatives from the government and from bilateral and multilateral partners started to increase during the last year of the project (2013–14) and during the postproject period (2015–19). World Bank and UNICEF joint support to the FMOH was raised as an exemplary collaboration of the two multilateral bodies during the launching event of the Scaling Up Nutrition Framework of Action in the 2010 Spring Meeting. Concrete guidance on multisectoral nutrition initiatives and links was provided through the collective efforts of revised NNP I (2013–15), NNP II (2016–20), the National Nutrition Coordinating Body, and the project.
- 2.17 The project established the National Nutrition Coordinating Body. This body facilitated the nutrition efforts of relevant ministries that were signatories of the NNP, including the Ministries of Health; Education; Agriculture and Rural Development; Trade and Industry; Labor and Social Affairs; Women, Children and Youth Affairs; Water and Energy; and Finance and Economic Development. According to the Annual Performance Report of the Health Sector Transformation Plan, the National Nutrition Coordinating Body has spearheaded the majority of nutrition-related activities involving other sectors (FMOH 2017). Although the performance of the coordinating body in its early years until about 2012 was limited, it steadily developed over time, resulting in the body being recognized for spearheading the majority of multisectoral activities under NNP II as documented by FMOH. Officials from FMOH informed the IEG mission that the coordinating body is being renamed the National Food and Nutrition Council to reflect its expanded scope, and it will be under the office of the prime minister, who will be in charge of appointing leadership and members of the council. This change in the

governance structure is expected to improve the accountability of all of the sector ministries and aims at overcoming the long-standing challenge to the FMOH through its National Nutrition Coordinating Body of holding other sectors accountable for the NNP implementation.

2.18 The CBN program was sustained over time and expanded. FMOH respondents informed the IEG mission that 752 woredas at the time of this review in 2019 had either CBN or other sector nutrition programs or a combination of both. Other government ministries established their own nutrition units. Furthermore, in agriculture, there was momentum to advance combined agendas such as nutrition-sensitive, gender-sensitive, and climate-smart agendas.8 Overall funding for nutrition increased from \$181 million in 2013–14 to \$330 million in 2014–15, and to \$455 million in 2015–16 (see appendix G on tracking funding for nutrition in Ethiopia across sectors). Donor contributions amounted to 88 percent of incremental funding, government contributions 11 percent, and nongovernmental organizations 1 percent. For the current period 2016–20, FMOH officials informed the IEG mission that incremental nutrition commitments amounted to about \$1.1 billion, notably from the Bill and Melinda Gates Foundation, UNICEF, USAID, and the World Bank.

2.19 The World Bank enhanced its efforts to address malnutrition in the country. The current World Bank portfolio for nutrition support significantly increased in multiple sectors, as shown in table 2.2.

Table 2.1. Current World Bank Ethiopia Portfolio on Nutrition

Project Name (Approval–Closing FY)	Focus Area	Project- Program Budget (\$, millions)	Estimated Nutrition Budget Included (\$, millions)
Promoting Young Women's Livelihoods (2018–21)	Increase women's empowerment and nutrition, promotion of nutrition-sensitive agriculture and livelihoods	2.73	2.73
Health Sustainable Goals Program-for-Results (2013–18)	Improve coverage of vitamin A among children 6–59 months, growth monitoring and promotion among children 0–24 months, and iron-folic acid therapy among pregnant women	350	40
Agriculture Growth Program II (2005–20)	Mainstream cross-cutting issues (gender, nutrition, and climate change) throughout its five main components (public agricultural services, agricultural research, small-scale irrigation, agriculture marketing and value chain, and project	350	17.5

Project Name (Approval–Closing FY)	Focus Area	Project- Program Budget (\$, millions)	Estimated Nutrition Budget Included (\$, millions)
	management and monitoring and evaluation)		
Agriculture Growth Program II Multidonor Trust Fund (2016–19)	Provide technical assistance to support the quality of implementation of the nutrition-related activities under Agriculture Growth Program II	5.5	5.5
Livestock and Fisheries Sector Development Project (2018–24)	Improve consumption of animal-source foods by women of reproductive age	170	8.5
Enhancing Shared Prosperity through Equitable Services Program-for-Results (2015–19)	Set up nutrition coordination platforms in Productive Safety Net Program (PSNP) woredas, training front-line service providers (health extension workers, social workers, and teachers) in PSNP woredas on nutrition, and increasing the frequency that PSNP mothers have contact with health extension workers	1,300	50
Productive Safety Net IV (2014–20)	Increase links between PSNP beneficiaries and community-based nutrition services and promotion of improved maternal, infant, and young child feeding behaviors	600	450
Water Supply, Sanitation, and Hygiene Project (2014–19)	Improve access to safe water, adequate sanitation, and hygiene practices	205	61.5
Pastoral and Agro-Pastoral Livelihood Resilience Project (2018–24)	Support beneficiaries in addressing gaps in nutrition knowledge and food handling and preservation skills for improved dietary intake within households	514	270
Total for nutrition		n.a.	906

Source: World Bank Country Office, Ethiopia, as of February 2019.

Note: Most of this nutrition funding is for nutrition-sensitive activities. PSNP = Productive Safety Net Program.

# What Worked, and Why?

# **Design and Preparation**

2.20 The project built on the existing mechanism and institutional arrangements to implement its nutrition interventions rather than establishing a new delivery infrastructure. By embedding its main activities into the service delivery mechanism of the Health Extension Program (initiated in 2003), the project increased the likelihood of its implementation and peripheral reach (Damtew, Chekagen, and Moges 2016).

Community activities were conducted by front-line HEWs who were already deployed in the country to deliver primary health care services at the level of health posts across remote communities in Ethiopia. Regarding support structures, the project's CBN services built on the existing institutional arrangements through a tiered mechanism in line with the decentralized administration structure of the government—central, regional, zonal, and woreda levels.

- 2.21 The project tapped into strong political commitment and was able to conduct a wide governmental and multipartner consultative process, including a joint partner preappraisal mission in October 2007 under government leadership. The fact that project preparation was closely linked to the preparation of the NNP (simultaneous preparation of project operations and the NNP policy document) further increased the motivation for stakeholder engagement, and the recognition of nutrition as a development agenda was growing.
- 2.22 The project raised the prominence of nutrition through its focused CBN activities. In principle, nutrition is an integral part of primary health care, but it had insufficient attention in the past. According to the ICR, the Lancet Series on Maternal and Child Nutrition of June 6, 2013 also recognized the relevance of CBN design features. Although community interventions were inherently pro-poor, it was likely that mothers and children from higher socioeconomic categories would have also benefited from the project. However, the dissemination of health education messages to the whole community (notably on breastfeeding and dietary practices) was a desirable gain that would be favorable to the population at large because inappropriate breastfeeding behavior was caused by the lack of knowledge in all wealth quintiles in Ethiopia.

#### Implementation and Supervision

- 2.23 Project implementation proceeded incrementally by phases, thus facilitating implementation rollout. Proper and realistic planning allowed the readiness of operational arrangements, including training. Project activities were rolled out in tranches that varied in timing and size, starting with 39 pilot woredas in 2008 (tranche 1), followed by 54 woredas (tranche 2) in 2009, 77 woredas (tranche 3) in 2010, and 58 woredas (tranche 4) in 2011, and subsequently reached 238 woredas in 2012. CBN further expanded to 372 woredas in 2015 and to a 386 woredas in 2017 (there were 700 woredas in the country in 2008 and 800 woredas in 2018). Concurrently, the project improved supervision and staff mobility, which were relatively limited before the project, thus facilitating both supervisory support and outreach service delivery through the provision of motorcycles, vehicles, and bicycles.
- 2.24 Within its behavior change interventions, the project was effective in adopting interactive approaches through community conversations and in strengthening the

quality of professional counseling. Traditionally, health education involved information transfer through prescriptive general messages and materials such as posters and brochures. While keeping these modalities (including mainstream media and community radio), the project also adopted a more interactive approach through community conversations, in which people are encouraged to "ask, analyze, and act" under what is called a triple-A approach (FAO 2011). Health education activities were linked with community mapping and participatory assessments. Nonhealth factors contributing to malnutrition were also covered. In addition, many mothers who have seen positive results with their children shared their experience with other mothers, household members, and other influencers in the community, thus expanding the dissemination of nutrition messages in the community. The importance of effective counseling and health education in addressing mothers' behavior and lack of knowledge was elucidated by a systematic review and meta-analysis showing that mothers who attended antenatal visits or who gave birth at a health institution were twice as likely to practice exclusive breastfeeding (Alebel et al. 2018).

2.25 Supportive government policies for micronutrients contributed to the attainment of related project objectives. Legislation on universal salt iodization, which was adopted and came into force in 2011, mandated iodization by private sector producers, thus increasing market availability of iodized salt and household use. The registration of zinc as an essential drug facilitated the availability of zinc as an integral part of the health post package and allowed HEWs to administer it to children. Zinc acetate was procured and distributed nationwide for the first time in the country's history.

# What Didn't Work, and Why?

## **Design and Preparation**

- 2.26 The multisectoral engagement has significantly grown after an initial four-year delay, though to a limited extent during the early project period. At the start-up, the project did not clarify the practical modalities for multisectoral engagement, that is, the how-to mechanisms. The PAD listed desirable links, but their realization was difficult without concrete plans, budgets, and focused advocacy (World Bank 2008b, 78–79). The project design included the establishment of a coordinating body but without clearly delineating its work plan or the expected trajectory for multisector nutrition engagement. Therefore, the coordinating body's performance was limited during the project period's early years.
- 2.27 There was a lack of clarity in promoting multisectoral synergies. This is in line with the conclusions of WHO (2013), which stated the following global findings: "Policies do not clearly state operational plans and program of work; do not have clear goals, targets, timelines or deliverables; do not specify roles and responsibilities; do not

identify the capacity and areas of competence required of the workforce; do not include process and outcome evaluation with appropriate indicators; and do not have the necessary or adequate budget for implementation." NNP II summarized related earlier shortcomings, stating that most line ministries (listed in the Other Important Results section) lacked an effective organizational structure to mainstream nutrition into their core activities and did not allocate related budgets to build or expand the links.

2.28 A second reason explaining the low initial progress in multisectoral work relates to resources. The respondents commented that challenges to multisector work were at a basic level involving resources, budgetary arrangements, and expertise. Kennedy et al. (2015) concluded that level of enthusiasm for multisector approaches to improve nutrition in Ethiopia was palpable, that international literature had focused too much on theoretical concepts, and that issues related to governance and budgets would need to be addressed to promote and sustain multisectoral approaches. Lessons learned during 2013–15 from the Ethiopia Multisectoral NNP (Harvey 2016) indicated that multisectoral approach requires incentives in budget, capacity, and accountability.

## Implementation and Supervision

- 2.29 Variable levels of human resource skills resulted in service quality fluctuations. As a senior regional health official said in an IEG interview: "We are climbing the mountain—we are now in the middle of it. We need to reach the top, but at present, we have different needs. We have dealt with access, and we must now focus on quality. We need higher skills, better training, know-how, and energy." For example, there were marked differences in productivity of HEWs in how they allocate their time, what services they focus on, and how long it takes to complete a task (USAID 2017). The IEG mission's limited field visits did not observe the HEWs' work overload, but there was consensus among interviewees that the quantity of tasks that HEWs are expected to provide in both health and nutrition is high. According to FMOH, a second-generation Health Extension Program is being developed and would include upgrading HEWs to the level of community health nurses. The current World Bank project, Enhancing Shared Prosperity through Equitable Services Program-for-Results and its additional financing (2015–23), continues to support training of front-line services providers.
- 2.30 Another factor affecting quality was the varying attention of health bureaus to support the Health Extension Program that embedded CBN activities in administrative and logistical support. There is often a generic tendency in community program evaluations to focus on the performance of front-line workers rather than the totality of operational elements, such as the supply of medicines, materials, and equipment, and weak referral systems. The IEG mission's site visits observed some gaps in logistical and support services, such as in some antibiotics and pediatric scales in Adea woreda health post. On logistics, transportation critical for outreach activities (such as bicycles) may be

suitable in flat areas, but not in rugged terrain. Only vehicles and motorcycles were replaced eventually after the project. There were four outreach substations for the Haben kebele health post, with small ones serving an average of 15 beneficiary women and larger ones an average of 100 women. The average walk for HEWs to reach the substations was about one hour. A study on the Ethiopian Health Extension Program and Variation in Health Systems Performance indicated marked variations between well-performing and lower-performing woredas in their implementation of primary health care and support from health bureaus in financial, technical, and supervisory support (Fetene et al. 2016). According to respondents, FMOH is planning to renovate and expand health posts and improve equipping and supplying.

## 3. Lessons

- 3.1 The use of interactive approaches at the community level can facilitate behavior change. While maintaining traditional communication modalities, the project also adopted a more interactive approach with community conversations, in which people are encouraged to "ask, analyze, and act" under what is called the triple-A approach derived from a UNICEF concept to assess the problem, analyze its causes, and take actions. The project prepared HEWs for this role through phased training, including higher counseling skills. Behavior change activities were well planned and linked with community mapping and participatory assessments. Nonhealth aspects of malnutrition were also covered. Many mothers who have seen positive results with their children shared their experience with other mothers, household members, and other influencers in the community, thus further disseminating nutrition knowledge in the community.
- 3.2 In very poor communities, CBN needs to complement behavior change interventions with income support to achieve the desired goals fully because behavior change also depends on the means to keep or to buy healthful and nutritionally rich food. Mothers can apply food diversity practices as counseled by CBN if they have the means to do so. This would contribute to mothers' participation in CBN and adherence to growth monitoring sessions. Poverty often creates food insecurity that prevents access to sufficient, safe, and nutritious food to meet basic dietary needs, resulting in severe vulnerability to both physical well-being and mental health.
- 3.3 Favorable institutional conditions, programmatic arrangements, and incentives facilitate the unfolding of multisectoral engagement. The project sought to advance multisectoral collaboration, but substantial engagement was visible only after several years because time was required for the actual buildup of nutrition efforts as an integral part of mainstream responsibilities in various sectors. In this sense, the Ethiopia experience shows that evaluations need sufficient time to pass for a plausible impact to have occurred, as noted in IEG's findings in World Bank (2010). This lesson is also in

consonance with USAID's lessons learned 2013–15 from the Ethiopia Multisectoral NNP indicating that the multisectoral approach requires patience, time, and continuous engagement, and that it requires incentives related to budget, capacity, and accountability.

- 3.4 Integration of nutrition operations with an existing and institutionalized service delivery mechanism at the community level facilitates CBN implementation. The project embedded its community interventions and micronutrient supplementation within the existing Health Extension Program, thus promoting its efficiency and community reach.
- 3.5 External collaboration with development partners, under government leadership, catalyzes international expertise and good practices that benefit and reinforce government policy and its nutrition agenda. Both the project and the national program led by the government benefited from such collaboration, which facilitated sharing lessons learned from international experience. Additionally, joint monitoring missions with the government and development partners provided a platform to maintain ongoing dialogue and collaboration.

<sup>&</sup>lt;sup>1</sup> The World Health Organization defines malnutrition as deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients. Malnutrition addresses three broad groups of conditions: (i) undernutrition (stunting [height-for-age], underweight [weight-for-age], and wasting [weight-for-height]; (ii) micronutrient deficiencies; and (iii) overweight.

<sup>&</sup>lt;sup>2</sup> Ethiopia declared its intention to end child malnutrition by 2030 with the launch of the Seqota Declaration on July 15, 2015. Ethiopia's Minister of Health, Kesete Admasu, announced the launch at the Third International Conference on Financing for Development. The Seqota Declaration reflects the government of Ethiopia's strong commitment to improve nutrition and recognizes the role of nutrition to propel sustainable development.

<sup>&</sup>lt;sup>3</sup>This Project Performance Assessment Report uses the project development objectives as a benchmark for the assessment, parsing it as follows: to contribute to improving the nutritional status of vulnerable groups by (i) improving child and maternal care behavior and (ii) increasing utilization of key micronutrients. Accordingly, contributing to improving the nutritional status of vulnerable groups will be assessed as the final outcome, with (i) and (ii) as intermediate outcomes. (Improving nutritional status was considered as a higher-level objective in the project appraisal document (World Bank 2008b) and the Implementation and Completion Results Report (World Bank 2015). The Project Performance Assessment Report uses the following definitions: (i) Vulnerable groups refer to children under age five, and pregnant and lactating women (World Bank 2008b, 4); (ii) nutritional status for children refers to stunting, wasting, and underweight (World Bank 2008b, 20); (iii) nutritional status for pregnant women refers to body mass index and anemia (Ethiopia Demographic and Health Survey 2016, pages 197–199); (iv) child and maternal care behavior refer to breastfeeding behavior, complementary feeding, and practices (World Bank 2008b, 5, 7); and (v) key micronutrients refer to four main micronutrients of concern to the National Nutrition Program: iodine, vitamin A, iron, and zinc (World Bank 2008b, 74).

<sup>4</sup> At appraisal, the country had about 700 woredas, and at the time of the Project Performance Assessment Report, the country had 800 woredas further divided into 15,000 *kebeles* (communities) according to the Ethiopian Government Portal (http://www.ethiopia.gov.et).

- <sup>5</sup> The four regions account for more than 80 percent of the country's population, and project coverage reached about 50 percent of that population. The country has nine national regional states (commonly called regions) and two administrative states (Addis Ababa and Dire Dawa administrative councils).
- <sup>6</sup> For example, the performance of volunteers to undertake GMP and to report data was not adequate and resulted in modest rates of GMP sessions (World Bank 2015, 61).
- <sup>7</sup> Wasting prevalence has changed little over time, declining nationally from 12 percent in 2005 to 10 percent in 2016, and the regional rates reflect this low pattern (in Tigray from 11.6 percent in 2005 to 11.1 percent in 2016, Amhara from 14.2 percent to 9.8 percent, and in SNNPR from 6.6 percent to 6 percent). However, the underweight rate increased in Oromia from 9.6 percent to 10.6 percent.
- <sup>8</sup> Vikas Choudhary, senior agricultural specialist and task team leader, Agriculture Growth Program, World Bank country office in Addis Ababa provided this information.

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## Appendix A. Project Performance Assessment Report Overview

The Independent Evaluation Group (IEG) assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the World Bank's self-evaluation process and to verify that the World Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses 20–25 percent of the World Bank's lending operations through fieldwork. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which executive directors or World Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEG staff examine project files and other documents, visit the borrowing country to discuss the operation with the government and other in-country stakeholders, interview World Bank staff and other donor agency staff both at headquarters and in local offices as appropriate, and apply other evaluative methods as needed.

Each PPAR is subject to technical peer review, internal IEG panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible World Bank Country Management Unit. The PPAR is also sent to the borrower for review. IEG incorporates both World Bank and borrower comments as appropriate, and the borrower's comments are attached to the document sent to the World Bank's Board of Executive Directors. After an assessment report is sent to the Board, it is disclosed to the public.

### About the IEG Rating System for Public Sector Evaluations

IEG's use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEG evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (additional information is available on the IEG website: http://ieg.worldbankgroup.org).

**Outcome:** The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. *Relevance* refers to the relevance of the objectives. Relevance of objectives is the extent to which the project's objectives are consistent with the country's current development priorities and with current World Bank country and sectoral

assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, sector strategy papers, and operational policies). *Efficacy* is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. *Efficiency* is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared with alternatives. The efficiency dimension is not applied to development policy operations, which provide general budget support. *Possible ratings for outcome*: highly satisfactory, satisfactory, moderately unsatisfactory, unsatisfactory, and highly unsatisfactory.

**Bank performance:** The extent to which services provided by the World Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan or credit closing toward the achievement of development outcomes). The rating has two dimensions: quality at entry and quality of supervision. *Possible ratings for Bank performance:* highly satisfactory, satisfactory, moderately satisfactory, moderately unsatisfactory, unsatisfactory, and highly unsatisfactory.

## Appendix B. Methodology

This report was prepared after document review, online literature review, and interviews in Addis Ababa with officials of the Federal Ministry of Health and the Pharmaceutical Fund and Supply Agency, and with individuals involved in the project and in nutrition. Interviews were also held with regional officials in Tigray and Oromia, and with woreda officials in Gulomekada Woreda, Tigray; and Adea Woreda, Oromia. Additional documentation on nutrition and health performance was supplied by the Federal Ministry of Health and World Bank Country Office. The project already had a solid base of evidence on many of its effects, notably from a self-evaluation by the World Bank (April 2015). The IEG evaluation methods sought to complement this existing knowledge and to generate lessons from the operation. In terms of additional data, the primary source consisted of the Ethiopia Demographic and Health Survey (EDHS 2016), which was implemented by the Central Statistical Agency, supported by the government of Ethiopia, the United States Agency for International Development, the government of the Netherlands, the Global Fund, Irish Aid, the World Bank, the United Nations Population Fund, the United Nations Children's Fund, UN Women, and the Demographic and Health Survey Program, Rockville, Maryland.

Interviews were related to the cycle of project operations, results, implementation experience, challenges encountered, quality aspects, contextual factors, views on what worked and didn't work and why, and the role played by other sectors in nutrition promotion. Discussions covered both the project implementation period of 2008–14 and the postproject period 2015–19.

Field visits were carried out in two kebeles to bridge macro-level results with field reality samples. Gobesaye Kebele in Oromia was chosen because Oromia represented central geographical settings, and Haben Kebele in Tigray because it was located in the furthest Northwestern region, bordering Eritrea. The field visits were largely centered on health posts that were the main routes for nutrition services at the community level. IEG mission attended actual service delivery sessions to observe how services were applied, quality aspects, and record keeping. Interactions were held with health extension workers (HEWs) and beneficiary mothers both at health posts and during household visits in the two kebeles. Discussions were also held with woreda authorities and nutrition focal points, who provided technical insights.

Table B.1. Evaluation Matrix: Links between Main Evaluation Aspects and Data Collection Methods

	Data Collection Methods				
Harmonized Evaluation Criteria	Portfolio review in the health and nutrition sectors	Review of academic and policy literature	Interviews and focus groups with stakeholders	Secondary data sources	CBN Site visits and interactions with HEWs
Relevance					
Relevance of objectives	YES	YES	YES		
Relevance of design	YES	YES	YES		
Efficacy					
Achievement of objectives:					
Behavior changes	YES		YES	YES	YES
Micronutrient use	YES		YES	YES	YES
Improved nutritional status	YES	YES		YES	
Efficiency					
Traditional methods: benefit-cost ratios, net present value, rate of return, and so on	YES	YES			
Aspects of design and implementation affecting efficiency	YES	YES	YES	YES	YES

*Note*: HEWs = health extension workers.

## **Appendix C. Basic Project Information**

#### **Project Cost**

Actual project cost for World Bank–financed activities under the IDA grant was \$26.73 million corresponding to 89.1 percent of the estimated SDR 18.8 million cost, equivalent to \$30 million at appraisal. The government contributed an amount equivalent to \$9.60 million or 100 percent of the estimated contribution at appraisal.

#### **World Bank Project Financing**

Country - Ethiopia

Project Name – Nutrition Project

Project ID - P106228

ICR Date - April 15, 2015

Original Commitment - \$30 million

Parallel financing. The additional support mobilized by the project aggregated at \$2.74 million as follows:

Rapid Social Response Multidonor Program: \$0.62 million.

Japan Social Development Fund Grant: \$1.81 million.

Japan Grant: \$0.31million.

Environmental Category – C

#### **Dates**

The project was appraised on 02/26/2008, approved on 04/29/2008, and became effective on 09/10/2008. A midterm review was carried out on 11/29/2011. The project was restructured on 4/2/2012 to updates baselines and improve the results framework. Development objectives and key associated outcome targets were not revised, maintaining the project ambition. The project was extended by four months on 12/16/2013 to complete implementation of activities, and it closed on 05/31/2014.

## **Appendix D. Project Ratings**

Table D.1. Principal Ratings

Indicator	ICR	ICR Review	PPAR
Outcome	Satisfactory	Moderately satisfactory	Satisfactory
Risk to development outcome	Moderate	Moderate	Moderate
M&E quality	Substantial	Substantial	Substantial
Bank performance	Moderately satisfactory	Moderately satisfactory	Moderately satisfactory
Borrower performance	Moderately satisfactory	Moderately satisfactory	Moderately satisfactory

*Note*: The Implementation Completion and Results Report (ICR) is a self-evaluation by the responsible Global Practice. The ICR Review is an intermediate IEG product that seeks to independently validate the findings of the ICR. M&E quality is the quality of monitoring and evaluation. PPAR = Project Performance Assessment Report.

#### Relevance

Relevance of the objectives. The objectives "to improve child and maternal care behavior, and to increase use of key micronutrients, To contribute to improving the nutritional status of vulnerable groups" were and remain relevant to Bank and country strategies, although the objective to improve child and maternal care behavior should have been more clearly stated as it largely derived from the mother's behavior. First, the objectives were consistent with the Country Assistance Strategy (CAS), 2008–11, that aimed to support Ethiopia in sustaining its emerging "dual take-off" in economic growth and basic services delivery (World Bank 2008a). The project was in line with the CAS strategic objective 1 on improving access and quality of basic service delivery, and with its strategic objective 3 on reducing vulnerability.

The objectives remained in general alignment with the World Bank's Country Partnership Strategy 2012–16 at the time of project closing. The partnership strategy emphasized increasing resilience and reducing vulnerability, and its second pillar focused on improving delivery of social services and developing a comprehensive approach to social protection and risk management (World Bank 2012). Also, the objectives continue to be relevant to the current Country Partnership Framework for FY18–22 and in line with its focus area 2 for building resilience and inclusiveness, and with its objective 2.5 for improving early childhood nutrition (World Bank 2017).

Second, the objectives remain relevant to the twin goals of the World Bank Group for Ending Extreme Poverty and Promoting Shared Prosperity. Third, the project was and remains responsive to country needs and government national plans. Given full alignment with World Bank and country strategies, relevance of objectives is rated **high**.

Relevance of the design. The project design laid out a strong rationale for community-based nutrition (CBN) interventions. But the alternatives considered at appraisal were limited to process aspects, that is, a choice between traditional lending and a program-wide approach. The results chain was generally clear and linked activities to outcomes, but with some gaps. The design included the establishment of a National Nutrition Coordination Body, but the results framework of the project was rather incomplete in keeping track of the functions of this institution under an expected trajectory for multisector nutrition engagement. The results chain for behavior change directly led inputs to outcomes, and could have further elucidated intermediate outputs.

Nevertheless, the design made effective use of the existing Health Extension Program which provided primary health care to mothers and children by embedding community-based nutrition activities within its service delivery mechanism. The project design appropriately targeted pregnant women and children during a critical age period where the most significant harmful impact of malnutrition can emerge in cognitive, motor and social development, school attainment and future economic productivity. Implementation arrangements were aligned with the decentralized institutional arrangements of the government, including central, regional, zonal and woreda levels. The design appropriately planned for a realistic rollout of CBN interventions in a phased manner. Given adequate overall design, but with some moderate shortcomings, relevance of design is rated **substantial**.

#### **Efficacy**

The assessment of efficacy took into consideration the predominant role of the World Bank–supported project in CBN during the project period, as shown in para. 1.14 of the main report, and the project-specific outcome indicators for the achievement of behavior change and micronutrient use (objectives 1 and 2). However, since the project considered the improvement of nutritional status (objective 3) as a higher-level objective, CBN-specific data were insufficient to assess nutritional status, hence, the IEG mission used region-specific data from the Ethiopia Demographic and Health Survey. As stated in para. 2.5, making inferences from regional data was appropriate because CBN coverage in terms of woredas was high in the four regions: almost universal in Tigray, 92 percent in SNNPR, 80 percent in Amhara, and 58 percent in Oromia.

However, these created challenges in data interpretation concerning nutritional status because of a dilution effect, as national data encompassed all women ages 15–49.

#### Objective 1: Improve Child and Maternal Care Behavior

**Rationale.** It was reasonable to expect that the provision of CBN services, supported by capacity building, improved skills, mobility, advocacy, information, counseling of mothers, behavior change communications suitable to the local needs, community conversations, and favorable government policies, would contribute to nutrition behavior changes by mothers for breastfeeding and dietary practices. In turn, improved nutrition behavior would be reasonably expected to contribute to improved nutritional status.

Outputs. CBN interventions were rolled out in tranches that varied in timing and size throughout 2009, 2010, and 2011, and covered 238 woredas by project closing. About 13,000 health personnel were trained in community-based nutrition, exceeding the target of 12,000. Health extension workers (HEWs) were also trained on a revised curriculum. The project provided dozens of vehicles, 1,600 motorcycles, and 28,750 bicycles to allow greater mobility to HEWs in outreach work, and to health centers for supportive supervision. Advocacy, behavior change communications, and counseling were undertaken by Federal Ministry of Health (FMOH) and HEWs, and through community conversations. Training was conducted on data collection, monitoring, and financial management at the federal and subnational levels, and, by project closing, 80 percent of CBN woredas were providing monthly nutrition data to the federal level, exceeding the target of 50 percent. The project financed a two-year masters course in nutrition, with 80 masters-level graduates.

Ten operational research studies relevant to both components 1 and 2 were conducted and disseminated, exceeding the target of eight. The studies were carried out by five local universities owing to constraints at the Ethiopia Health and Nutrition Institute to undertake them as originally planned. The topics included: effectiveness of school health and nutrition education to improve health and dietary practices; bioavailability, digestibility, and sensory acceptability of complementary foods; effect of nutrition education on child feeding practices; effectiveness of organizing newly-wed women and adolescent girls to improve access and use of nutrition services; reaching school and nonschool attending adolescent girls for iron supplementation; national iodized salt coverage in Ethiopia; national food consumption survey; challenges and opportunities in adapting community-based nutrition among pastoralists; modalities to improve pregnant women's compliance to daily iron folate supplementation; and development of integrated training on quality and implementation of community-based nutrition.

**Outcomes.** The results for behavioral improvements are discussed in section 2 of the main report and show improved maternal and child care behavior. Achievement of this objective is rated **substantial**.

#### **Objective 2: Increase Use of Key Micronutrients**

**Rationale.** It was reasonable to expect that the provision of key micronutrients, supported by capacity building, improved skills, mobility, advocacy, information and behavior change communications and counseling, and favorable government policies, would lead to increased use of key micronutrients by mothers and children. In turn, these would be reasonably expected to contribute to improved nutritional status.

Outputs. In addition to the outputs noted above under objective 1, the project provided key micronutrients to beneficiary mothers and children. Iron-folic acid tablets were provided to pregnant women as part of antenatal care under the Health Extension Program. Vitamin A doses were provided to children aged 6–59 months, and quarterly screenings were held for undernourished children through Child Health Days. A Universal Salt Iodization policy was adopted through legislation, thus increasing market access and household use. Zinc was registered as an essential drug and included in the health post package, allowing its use by HEWs, thus enhancing its availability and use by households.

**Outcomes.** Increases in micronutrient use are discussed in para. 2.7 of the main report, and some targets were exceeded. The achievement of this objective is rated **substantial**.

#### Objective 3: Improve the Nutritional Status of Vulnerable Groups

**Rationale.** It was reasonable to expect that improvements in nutrition behavior, increased use of micronutrients, deworming, identification and treatment of malnourished children would contribute to improving the nutritional status of vulnerable groups.

**Outputs.** In addition to the outputs described above under objectives 1 and 2, children were dewormed, and malnourished children were identified through growth monitoring and treated.

**Outcomes.** Plausible contributions to nutritional status improvements in pregnant women and children under age five children are discussed in Objective 2: Increase Use of Key Micronutrients section. The achievement of this objective is rated **substantial**.

**Overall efficacy rating.** As both intermediate outcomes and the final outcome were almost fully achieved, overall efficacy is rated **substantial**.

### Efficiency

The PAD drew on a benefit-cost analysis that was undertaken for several interventions affecting nutritional outcomes in Ethiopia, as part of the economic and sector work done by the World Bank (*Malnutrition in Ethiopia: Current Interventions, Successes, Cost-Benefit* 

Analysis, and the Way 20 Forward), but no project-specific analysis was carried out (World Bank 2008b, 66–69). The PAD's analysis covered selected interventions similar to project activities under component 1 (Supporting Nutrition Service Delivery): reduced child and maternal mortality, increased economic productivity (through the prevention of detrimental effects of stunting and low birth weight), and increased mental ability of children (by addressing micronutrient deficiencies). The benefit-cost ratios were favorable and indicated that benefits were several times higher than the cost, but no specific numbers were provided. The analysis did not address activities related to component 2 (Institutional Strengthening and Capacity Building) because of the lack of available data on benefits and impacts.

The ICR calculated a benefit-to-cost ratio of 4.6 to 1, monetizing benefits including saved child and maternal lives and increased lifetime earnings from reduced stunting, anemia, low birth weight, and vitamin A deficiency, and exclusive breastfeeding (World Bank 2015, 27–29 and 41–48). Using a 5 percent discount rate, the net present value of the project was estimated at \$79.9 million with a modified internal rate of return of 38 percent (a modified value adjusted the rate to account for the difference between reinvestment rate and investment return, as rates of return tend to overstate the true rate of return when they assume that all benefits are reinvestable).

The ICR's calculation employed realistic and conservative assumptions, namely an earnings premium of 10 percent for stunting avoidance, 5 percent for anemia avoidance, and 7.5 percent for low birth weight avoidance which were applied as the effect of increased productivity (World Bank 2015). Future wages were discounted at 5 percent per year, after adjusting for normal mortality. Each year of productive life was valued as the real per capita gross domestic product estimated at \$222, and the productive lifespan was defined as lasting from 15 until 53 years of age. The lifetime income stream of a 2year old child was valued at \$1,803, and that of a 25-year-old mother was valued at \$2,918. The ICR conducted a sensitivity analysis using a 10 percent discount rate, which showed a net present value of \$64.9 million. Under conservative assumptions using lower bound value of all estimates, the net present value was \$44 million and the benefit-cost ratio was 3. The results suggested that the monetized benefits substantially exceeded the costs of the project. The ICR suggested that returns could be even higher, as the analysis did not include the full spectrum of outcomes such as the benefits of institutional strengthening and capacity building that would contribute to making evidence-based decisions and to realize potential efficiency gains, and other benefits such as avoiding downstream losses from the high use of health resources and additional care for people with reduced cognitive development.

There is an international acknowledgement that community-based interventions are cost-effective in improving nutrition. According to Levin (2014), there is strong evidence

that direct nutrition interventions like CBN are cost-effective, but there is less evidence on nutrition-sensitive interventions related to some sectors, especially those that require integration either across different sectors, or at different levels of service delivery.

Main aspects of design and implementation contributed to efficiency. The project built on an existing program to deliver its services, although there were concerns about the level of skills of HEWs in the Health Extension Program and their workload. The project used existing federal and regional institutional structures in the country.

The project had a nine-month delay in its launch due to a governmentwide business process reform and slow financial management during the initial three years of implementation, but the delays were overcome with extensive additional training and added capacity (see the Borrower Performance section). The IEG mission followed up on procurement delays for iron supplements that were reported by the ICR, which also noted that additional registration processes were required from suppliers after FMOH determination that iron folate supplements should be treated as a medical supply. The Pharmaceutical Fund and Supply Agency in charge of iron supplements procurement explained to IEG mission that international competitive bidding procurement guidelines had to be followed and that a dialogue among key players in FMOH would have been useful to discuss expected delivery dates that should have been set in concert with the Pharmaceutical Fund and Supply Agency. The impact of the stated delays was negligible on project operations, as actual use targets for iron supplements were highly exceeded in project areas, throughout implementation. As for iodized salt, intended results were exceeded, facilitated by government policy that mandated iodization.

Concerning grant fund use, 11 percent of the project SDR proceeds remained unused at closing. The ICR noted large exchange rate fluctuations. Project staff indicated that planned allocations available to the project in local currency were virtually fully used by project closing, with \$14,000 equivalent remaining. The transitory implementation delays and the variability in regional performance did not impact the efficient realization of the desired results, some of which were exceeded as early as 2011, three years into project implementation. Hence, the impact of the above-mentioned moderate shortcomings on the efficient realization of project activities was insignificant. Given the cost-effectiveness of community-based interventions, appreciable returns, favorable aspects of design and implementation that contributed to efficiency, with some moderate shortcomings in administrative and operational efficiency, overall efficiency is rated **substantial**.

**Overall outcome.** Given **high** relevance of objectives, **substantial** relevance of design, **substantial** efficacy and efficiency, overall outcome is rated **satisfactory**, indicative of essentially minor shortcomings in the project's preparation, implementation, and achievement.

The risk to development outcome is rated moderate. CBN interventions were integrated with regular services and CBN continued to expand in the country. Although there are no major immediate threats to outcome sustainability, efforts need to be maintained in demand generation and aspects of service quality. Incremental contributions for nutrition continued to grow from both the government and development partners, including the World Bank, aggregating at about \$1.1 billion for 2016–20 (see para. 2.8). Nutrition-specific activities and nutrition-sensitive interventions, which address broader underlying determinants of malnutrition, continued to increase (see appendix D and table 2.2 of the main report). Government commitment remains high and is underscored by its financial allocations, declarations, support to the Health Extension Program and its continued strengthening, and the inclusion of nutrition indicators in national development plans. However, there is a continued gap in financing for the high-impact nutrition interventions: it is estimated that more than \$220 million annually would be needed to scale up a package of nutrition-specific interventions over the next decade for Ethiopia to meet its targets for stunting, wasting, anemia, and breastfeeding (World Bank 2018, 77). At the same time, operational areas that require continued attention are logistical and supply support, financial management at regional and subregional levels, and monitoring & evaluation. In the foreseeable future, the current favorable and encouraging attention to nutrition efforts in various sectors should not inadvertently diminish the primary focus on a subset of direct nutrition-specific interventions, such as CBN, and which are critical to improve malnutrition.

Bank performance. Project preparation benefited from a strong participation of the government and a multipartner team formed in 2007 to determine nutrition objectives, activities, financing priorities, and implementation arrangements. The design was sound in its strategic relevance and approach, and in its focus on poor and food insecure districts, although added attention could have been provided to alleviate the lack of means for very poor mothers in collaboration with relevant sectors. The design of technical interventions adequately built on good practices for nutrition-specific operations and integration with health. Although preparation anticipated and mitigated potential implementation risks, those of insufficient fiduciary capacity and monitoring and evaluation (M&E) capacity were not adequately identified. Modalities for tracking the performance of the national coordinating body and advancing intersectoral collaboration, were not fleshed out. Quality at entry is rated moderately satisfactory.

In terms of supervision, there were two task team leaders during the implementation period. Supervision was reportedly proactive, building on a strong professional relationship between the World Bank team and FMOH officials. Through regular supervision missions, often jointly carried out with development partners, and reliance on specialists based in the country office, the team reportedly provided effective implementation support and fiduciary oversight. The team maintained a constructive

dialogue with stakeholders. The team carried out a focused midterm review that provided information for improving the results framework and for NNP revisions to clarify sectoral engagement modalities. Human resource constraints were addressed, including the addition of fiduciary staff, resulting in improved financial management performance, disbursements, and overall implementation. The quality of supervision is rated **satisfactory**. The aggregation of both subratings for quality at entry and supervision indicate an overall Bank performance rating of **moderately satisfactory**.

**Borrower performance.** To a large extent, the government and implementing agencies were indistinguishable. There was no dedicated project implementation unit, and the federal government through the Federal Ministry of Health was responsible for project implementation. The federal level was assisted in project implementation by lower level government institutions, namely, regional health bureaus and Woreda Health Offices in accordance with existing governance systems. Assistance was also sought from the Ethiopia Health and Nutrition Institute in M&E and research, and from the Pharmaceuticals Fund and Supply Agency in pharmaceutical procurement. Therefore, this PPAR opted for a unified rating for borrower performance.

Ownership and commitment to achieving development objectives were strong as demonstrated through policy, institutional support and budgetary allocations. The federal government continued to strengthen the Health Extension Program that carried CBN activities. The government's close involvement and full engagement remained high. Initial shortcomings were observed and can be characterized as early implementation delays, largely in financial management. Also, there was a delay in the project launch caused by a systemwide government reform. Limited experience with World Bank guidelines was cited as a reason for slow processes in the first three years. Early challenges in overall human resource capacity and financial management were addressed after the midterm review of 2011.

An action plan for strengthening fiduciary performance was developed and implemented. The government increased nutrition-related staffing at the national level, and appointed regional nutrition coordinators in project areas for the health sector and for liaison with other sectors at the local level. Training was enhanced, notably through training of financial managers in 144 woredas. Federal-level accountant training was provided to allow cascading training to woreda accountants. As a result, statements of expenses were settled quickly, and overall disbursement patterns improved through the remainder of the project period. There were no qualified audits and an in-depth financial management supervision report in March 2014 confirmed adequate financial management under the project. Hence, the initial moderate shortcomings and delays were transitory. Although the performance of the National Nutrition Coordination Body was limited during the initial project period, performance improved steadily and the

government reported that the coordinating body has spearheaded the majority of nutrition-related activities involving other sectors (FMOH 2017). IEG mission was informed that this body is being renamed as National Food and Nutrition Council. Overall government performance is rated **moderately satisfactory.** 

**M&E quality.** The indicators were linked to behavioral and micronutrient objectives, but there were insufficient indicators to assess improvement in nutritional status under the project's M&E, as nutritional status was interpreted by the PAD and ICR as a higher-level objective. Nevertheless, there was a strong commitment to evaluation from the start for both the project and NNP, and strengthening M&E was an integral part of component 2. The national health management information system did not initially include nutrition indicators, and the project planned for CBN data collection on a monthly basis from the woreda level to regional health bureaus and to the national level. An independent evaluation was planned. Strengthening existing systems included the health management information system, Integrated Disease Surveillance and Response system, and Demographic Surveillance Sites.

Initially, M&E implementation faced challenges at the woreda level owing to limited staff capacity and skills, but these were addressed at the 2012 restructuring, resulting in notable improvements in the timely flow of reports and their quality. CBN data were collected on a monthly basis, and, by project closing, over 80 percent of woredas were providing timely reporting. The National Health Monitoring Information System was revised under the project to include growth monitoring and promotion. A midcourse evaluation of CBN activities was carried out by Tulane University in 2011, supported by UNICEF. Surveys were carried out by local partners, Addis Continental and Mela. The analysis was conducted by Tulane University and monitored by the Ethiopian Health and Nutrition Research Institute. The endline surveys were not completed because of related supply issues within UNICEF. However, region-specific Ethiopia Demographic and Health Survey data were available.

Apart from the routine use of M&E during implementation, the findings were used by the government to inform a new National Nutrition Program (NNP II). Considering all aspects of M&E, the overall quality of M&E is rated **substantial**.

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## **Appendix E. Other Issues**

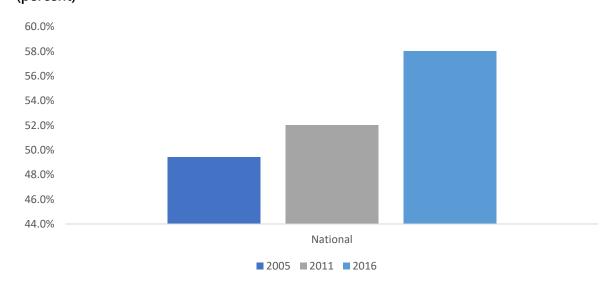
**Safeguards.** The project did not trigger any safeguard policies, and it was classified as environmental category C.

**Financial management.** During the initial years of the project, issues related to weak staff capacities and skills were identified, including for budgeting, internal control, and financial reporting. An action plan for improvement was developed at the midterm review in 2011. As noted in appendix A, training was provided to financial managers in 144 woredas, and federal and woreda accountants. Nutrition coordinators were hired to work at the regional level. As a result, statements of expenses were settled quickly, and overall disbursement patterns improved through the remainder of the project period. No qualified audits were reported, and a financial management supervision report in March 2014 confirmed adequate financial management under the project.

**Procurement**. Procurement was undertaken according to guidelines. Slow procurement processes were observed in the initial years. The lack of familiarity with World Bank guidelines was cited. Delays that were reported in the ICR on the procurement of iron supplements are discussed in the Efficiency Section in appendix A of this report. The Pharmaceutical Fund and Supply Agency explained to IEG mission that international competitive bidding procurement guidelines had to be followed and that a dialogue among key players in FMOH would have been useful to discuss anticipated delivery dates. Such delays had a negligible impact on project operations, and use targets for iron supplementation in the field were highly exceeded in project areas.

## Appendix F. Demographic and Health Survey Data, 2005, 2011, and 2016

Figure F.1. National Prevalence of Exclusive Breastfeeding for Children under Age Six Months (percent)



Source: Ethiopia Demographic and Health Survey data.

Figure F.2. Median Duration of Exclusive Breastfeeding in 11 Regions

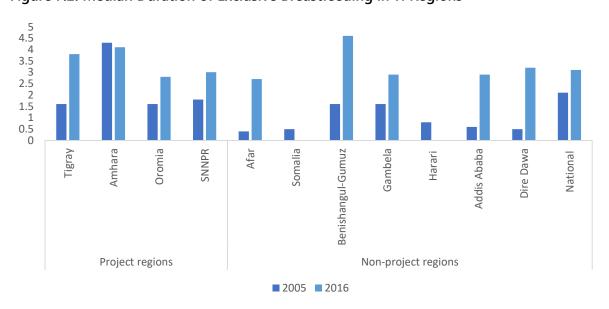


Figure F.3. Minimum Dietary Diversity among Children under Age Two in 11 Regions and Nationally (percent)

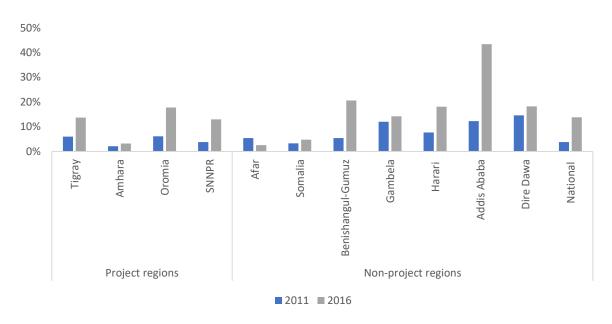


Figure F.4. Vitamin A Supplement Use among Children under Age Five in 11 Regions and Nationally (percent)

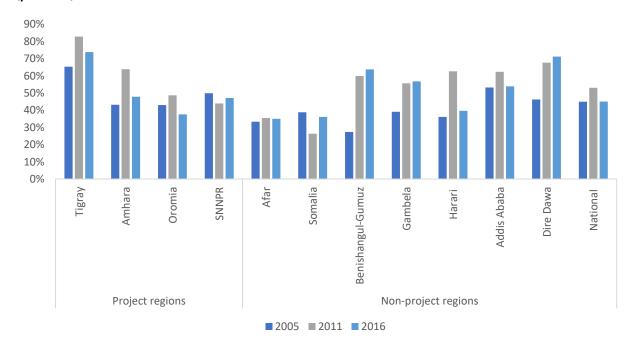


Figure F.5. Households with Iodized Salt in 11 Regions and Nationally (percent)

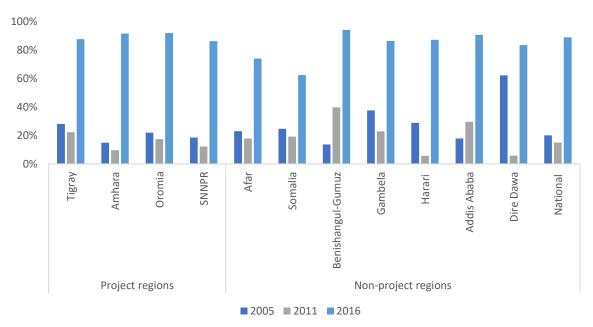


Figure F.6. Nutritional Status of Women of reproductive age (BMI <18.5) in 11 Regions and Nationally (percent)

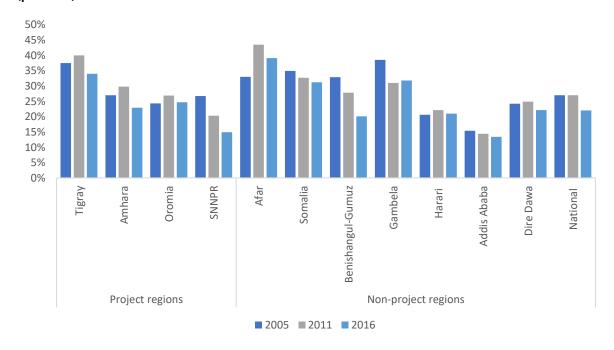


Figure F.7. Prevalence of Anemia in Women of RA in 11 Regions and National (percent)

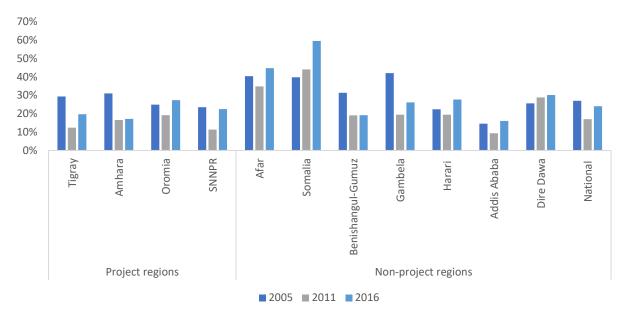


Figure F.8. Prevalence of sStunting among Children under Age Five in 11 Regions and Nationally (percent)

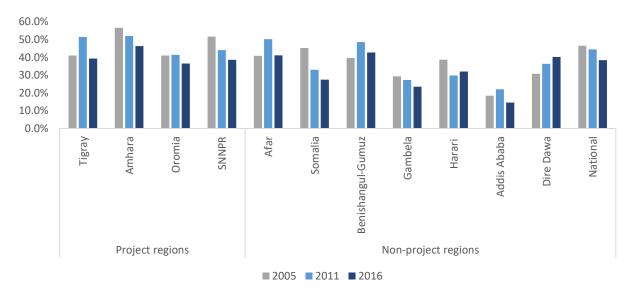
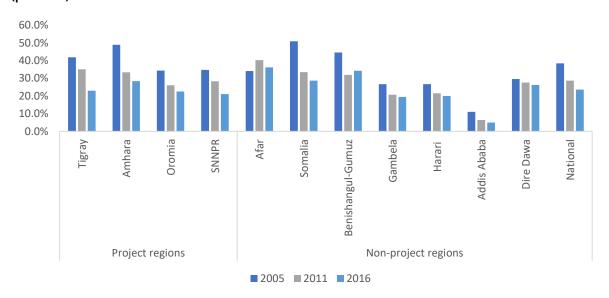


Figure F.9. Prevalence of Underweight among Children under Age Five in 11 Regions and Nationally (percent)



# **Appendix G. Tracking Funding for Nutrition in Ethiopia across Sectors**

Table G.1. Funding by Financing Source and Intervention, 2013–16 (\$, millions)

	Expenditures	Expenditures	Planned Budgets
Towns of Fronting Course	•	•	•
Type of Funding Source	2013/2014	2014/2015 319.6	2015/2016
Donor organizations (Bilateral, Multilateral, and Foundations)	168.7	319.6	400.0
Nutrition and water, hygiene, and sanitation	8.4	118.5	142.2
PSNP nutrition component	3.1	2.9	72.2
Emergency assistance (food support and resources)	24.6	62.7	56.0
Promotion of nutrition-sensitive agriculture and food security	36.9	38.3	42.8
Capacity building for nutrition	8.6	20.4	18.6
Behavior change communication (BCC) & breastfeeding promotion	7.8	7.8	10.1
Management of acute malnutrition (emergency)	16.4	6.8	9.1
Nutrition & infectious diseases	15.4	11.6	7.0
Management of acute malnutrition (nonemergency)	12.4	17.1	6.3
School health & nutrition	11.9	11.0	6.0
Micronutrients	4.1	5.7	3.3
Growth monitoring and promotion	0.8	0.4	1.4
Advocacy for nutrition	0.7	0.4	1.1
Integrated package of nutrition interventions	0.1	_	0.4
Support for the implementation of multisectoral nutrition actions	_	0.1	0.1
Government	5.6	4.8	49.9
School health & nutrition	3.9	2.3	30.2
PSNP nutrition component	_	_	17.5
Support for the implementation of multisectoral nutrition actions	1.7	1.8	1.9
Micronutrients	_	_	0.1
Promotion nutrition-sensitive agriculture and food security	0.1	0.1	0.05
Capacity building for nutrition		0.03	

	Expenditures	Expenditures	Planned Budgets
Type of Funding Source	2013/2014	2014/2015	2015/2016
Behavior change communication (BCC) and breastfeeding promotion	_	0.005	_
Nutrition and lifestyle/chronic diseases	_	0.01	
Nutrition and water, hygiene, and sanitation	_	0.05	_
International nongovernmental organizations	7.1	5.3	5.2
Emergency assistance (food support and resources)	0.5	1.2	2.4
Behavior change communication (BCC) and breastfeeding promotion	0.01	0.3	0.9
Management of acute malnutrition (emergency)	2.3	1.0	0.8
Management of acute malnutrition (nonemergency)	0.7	0.7	0.5
School health and nutrition	1.9	0.01	0.2
Capacity building for nutrition	0.1	0.4	0.2
Promotion of nutrition-sensitive agriculture and food security	0.9	1.3	0.1
Nutrition and water, hygiene, and sanitation	0.1	0.1	0.04
Growth monitoring and promotion (GMP)	0.003	0.003	_
Micronutrients	0.3	_	_
Integrated package of nutrition interventions	_	0.1	
Nutrition and infectious diseases	0.01	0.04	
Total	181.5	329.7	455.1

Source: Ethiopia, Federal Ministry of Health, results for Development and Children's Investment Fund Foundation; website (www.moh.gov.et). Ethiopian fiscal years 2006 to 2008 (2013/2014 to 2015/2016).

Note: — = not available.

## **Appendix H. List of Persons Met**

WORLD BANK		
Ziauddin Hyder	Senior Nutrition Specialist, Project Task Team Leader	
Erica Marie Lutz	Senior Nutrition Specialist	
Frew Tekabe	Senior Nutrition Consultant, Agriculture Growth Program	
Lisa Shireen Saldanha	Nutrition Specialist	
Anne Margreth Bakilana	Program Leader for Human Development	
Roman T. Gebremedhin	Africa Early Years Fellow, HNP	
Roman Tesfaye	Senior Operations Officer, Co-Task Team Leader for the Health SDG Program-for-Results, GHN07, HNP	
Vikas Choudhary	Senior Agricultural Specialist, Task Team Leader, Agriculture Growth Program	
GOVERNMENT	, STAKEHOLDERS, AND DEVELOPMENT PARTNERS	
Central Level		
H.E. Dr. Lia Tadesse	State Minister, Federal Ministry of Health, FMOH	
Dr. Meseret Zelalem	Director, Maternal & Child Health and Nutrition, FMOH	
Dr. Mesfin Kebede	Assistant Director, Maternal & Child Health and Nutrition, FMOH	
Mrs. Frezer Abebe	Nutrition Case Team Leader, FMOH	
Dr. Belaynesh Yitru	Adviser, Nutrition Specialist, FMOH	
Mr. Birara Melese Yalew	Nutritionist and Senior Adviser to maternal and Child Nutrition, FMOH	
Dr. Frew Lemma	Senior Nutrition Specialist, Nutrition Case Team, FMOH	
Dr. Loko Abreham	Director, Pharmaceutical Fund and Supply Agency (PFSA)	
Pierre-Luc Vanhaevebeke	Nutrition Coordinator, European Union	
Regional Level		
Tigray Region:		
Dr. Hagos Godefy	Head, Tigray Regional Health Bureau, Mekele	
Mr. Teksay Weldemaniam	Deputy Regional Bureau Head, Mekele	
Mr. Mengeshe Bahveselasse	Regional Nutrition Team Leader, Mekele	
Mr. Chens Hailu	Woreda Nutrition Coordinator, Gulomekada Woreda	
Mr. Mebrahiu Sebeya	Supervisor, Haben Kebele Health Post, Tigray	
Oromia Region:		
Dr. Abiku Tadesse	Zonal MCH Expert	
Mr. Degaga Zaonde	Deputy Woreda Health Office, Adea Woreda	
Mr. Mekonnen Jotie	Nutrition Focal Person, Adea Woreda	
Dr. Mekonnen Germane	Communicable Disease Expert, Adea Woreda Health Office	
Dr. Aklilu Hayiliye	Under-5 Out Patient Department official, Primary Health Care	
Health Extension Workers, Beneficiary Mothers, and Household visits		
Haben Kebele, Gulomekada Woreda,	Tigray Region	
Gobesaye Kebele, Adea Woreda,	Oromia Region	