

# ENDING RURAL HUNGER

The case of Ethiopia

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## Abstract

Ethiopia's nutrition needs emerge as some of the most severe in sub-Saharan Africa and are major challenges to its achievement of Sustainable Development Goal (SDG) 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture." Based on food and nutrition security (FNS) data from the Brookings Ending Rural Hunger (ERH) project at Brookings Institution and national sources, we find that improving Ethiopia's state of FNS depends on three priority areas. First, increasing access to food (through the reduction of extreme poverty, and the expansion of coverage and adequacy of social safety nets), promoting the adoption of balanced nutrition, and mobilizing resources for targeted FNS programming are key. Second, reducing vulnerability to consumption and income shocks, while also mitigating their impacts through income diversification and agricultural insurance are necessary. Third, building the productive capacity of agriculture to sustainably address and maintain long-term food security is crucial.

## Abbreviations and acronyms

|          |  |
|----------|--|
| ADLI     | Agricultural Development Led Industrialization   |
| AfDB     | African Development Bank   |
| AGOA     | African Growth and Opportunity Act   |
| AGP      | Agricultural Growth Program  |
| AGP-AMDe | Agricultural Growth Program-Agri Business and Market Development                                       |
| ATA      | Agricultural Transformation Agency   |
| CAADP    | Comprehensive Africa Agriculture Development Programme   |
| CASCAPE  | Capacity Building for Scaling up of Evidence-based Practices in<br>Agricultural Production in Ethiopia |
| CFSVA    | Comprehensive Food Security and Vulnerability Analysis   |
| CHS      | Core Humanitarian Standard   |
| CRGE     | Climate Resilient Green Economy  |
| CSA      | Central Statistical Agency   |
| DAG      | Development Assistance Group   |
| DFID     | United Kingdoms' Department for International Development  |
| DHS      | Demographic and Health Survey  |
| DRR      | Disaster Risk Reduction  |
| ECRC     | Environment and Climate Research Center  |
| EDF      | European Development Fund  |
| EPHI     | Ethiopian Public Health Institute  |
| ERH      | Ending Rural Hunger  |
| FAO      | Food and Agriculture Organization  |
| FDI      | Foreign Direct Investment  |
| FNS      | Food and Nutrition Security  |
| FTF      | Feed the Future  |
| GTP      | Growth and Transformation Plan   |
| HABP     | Household Asset Building Program   |
| HCE      | Household Consumption and Expenditure Survey   |
| IFAD     | International Fund for Agricultural Development  |
| MAFAP    | Monitoring and Analyzing Food and Agricultural Policies  |
| MDG      | Millennium Development Goals   |
| MoANR    | Ministry of Agriculture and Natural Resources  |

|        |  |
|--------|--|
| MoE    | Ministry of Education  |
| MoEFCC | Ministry of Environment, Forest and Climate Change           |
| MoFEC  | Ministry of Finance and Economic Cooperation                 |
| MOH    | Ministry of Health   |
| MoI    | Ministry of Industry   |
| MoT    | Ministry of Trade  |
| MoWCA  | Ministry of Women and Children's Affairs                     |
| NDRMC  | National Disaster Risk Management Commission                 |
| NNP    | National Nutrition Program                                   |
| NPC    | National Planning Commission                                 |
| ODA    | Official Development Assistance                              |
| OECD   | Organization for Economic Cooperation and Development        |
| OFSP   | Other Food Security Programs                                 |
| PSNP   | Productive Safety Net Program                                |
| REDD   | Reducing Emissions from Deforestation and Forest Degradation |
| SDG    | Sustainable Development Goals                                |
| SLMP   | Sustainable Land Management Program                          |
| TLU    | Tropical Livestock Unit                                      |
| USAID  | United States Agency for International Development           |
| WHO    | World Health Organization                                    |
| WMS    | Welfare Monitoring Survey                                    |



# 1 Introduction

Recognizing the importance of food and nutrition security (FNS) for improving public health, labor productivity and economic growth, African governments have expressed their commitment to end hunger by signing the Malabo Declaration, under the auspices of the African Union (AU) in June 2014 as well as the Sustainable Development Goals (SDGs) at the United Nations Sustainable Development Summit in September 2015. The Malabo Declaration aims to reduce childhood malnutrition (under-five stunting to 10 percent and wasting to 5 percent)<sup>2</sup> by 2025, and the SDGs aim to end *all* forms of malnutrition—including those stated in the Malabo Declaration—by ensuring access to sufficient and nutritious food for all people by 2030 (SDG2). In addition to the above time-bound targets on FNS, these agendas also outline implementation strategies ranging from poverty reduction to improving agricultural productivity to promoting resilient agricultural practices.<sup>3</sup>

The global Ending Rural Hunger (ERH) database tracks countries' progress towards achieving SDG2 and ranks countries on FNS-related needs, policies, and resources, with the underlying assumption that targeting countries with high needs but FNS-friendly policy environments maximizes return on investments to ending hunger. Ethiopia is one of the six Africa case studies the project covered along with Ghana, Nigeria, Senegal, Uganda, and Tanzania.

Using quantitative analysis backed with a review of national policy documents and interviews with on-the-ground stakeholders, this report investigates where Ethiopia's FNS needs are the highest, examines whether resources and policies are aligned well to address those needs, and documents the country's implementation challenges to achieve national, regional, and global FNS-related targets.

The analysis of the ERH database and other national statistics indicate that Ethiopia's challenges in achieving SDG2 by 2030 are remarkably great, as the country is one of the most food- and

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<sup>2</sup> Under-five stunting measures the percentage share of children under the age of five whose height-for-age is below two standard deviations from the international reference population median (i.e., WHO Child Growth Standards median) height of their age group. Similarly, under-five wasting measures the percentage share of children whose weight-for-height is 2 standard deviations below the WHO Child Growth Standards median among children under five.

<sup>3</sup> Specifically, the Malabo Declaration have the following targets: Sustaining agricultural growth at annual rate of 6 percent, halving poverty, doubling agricultural productivity and income, building resilience, and maintaining agricultural spending target of 10 percent of public spending.

nutrition-insecure African countries, owing to the low productivity of its small-holder agriculture and heightened vulnerabilities to climate and production shocks, including from droughts.

Using the ERH database, we found that:

1. The prevalence of undernourishment and malnourishment in Ethiopia are high even by African standards, and Ethiopia ranks as one of the 10 most affected African countries in terms of adult and childhood malnutrition rates as well as rural multidimensional poverty.
2. Agricultural production in Ethiopia is characterized by below average labor productivity and volatile crop yield for cereals, which constitute 87 percent of the total grain production for small-holder farmers and 73 percent for commercial farms (CSA, 2017).
3. Ethiopia ranks among the top 10 African countries for the extent to which government documents fully recognize the importance of access to finance for farmers, equitable management of water for agriculture, and general measures of rural investment climate.
4. However, actual coverage rates in road density, irrigation, and total renewable water resources reveal that Ethiopia heavily depends on rain-fed agriculture, in the face of limited renewable water resources and poor infrastructure coverage.
5. Furthermore, access to finance in rural areas is limited, and the total agricultural area devoted to modern varieties of crops is below the sub-Saharan African average.
6. ERH's ranking of political prioritization of FNS in public policy documents puts Ethiopia's nutrition policy as its top priority.<sup>4</sup> At the same time, Ethiopia's policy commitments on agriculture, rural social assistance, women's enabling environment, and research, skills, and extension are identified as areas where gaps—relative to the regional averages and global best practices—are the highest.
7. Both public and external resources play major roles in financing FNS in Ethiopia, with an average resource per rural capita of \$11 per year over the 2009-2013 period. Agricultural foreign direct investment, however, is well below the regional average and plays a limited role in financing FNS.

Ethiopia is indeed one of the high-need countries, notably when it comes to malnutrition and the agricultural productivity gap, and is also resource constrained despite a relatively good policy

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<sup>4</sup> Political prioritization of agriculture is measured as the average of agricultural spending intensity as a share of agricultural GDP, the degree to which citizens believe having "affordable and nutritious food" as priority in MyWorld survey, and the extent to which national development plans and budget documents emphasize the role agriculture and rural development play in poverty reduction and economic growth. Policy commitment to promoting balanced nutrition is measured as the average of government's efforts in adopting balanced nutrition guideline with time-bound nutrition targets, promoting complementary feeding to children, and in attaining WHO recommended food safety measures.

environment for FNS. This finding led us to further probe the disconnect between these strong policy commitments on one hand and high food and nutrition insecurity on the other, using a qualitative analysis of national strategy documents and stakeholders' engagement with over a dozen on-the-ground governmental and non-governmental actors in Ethiopia.<sup>5</sup> Our interviewees almost unanimously agreed that FNS is a priority in Ethiopia and directed us to the national development strategy and its programs, but (there is always a "but"), there are implementation challenges, as discussed below.

Agriculture and rural development are indeed central to Ethiopia's Growth and Transformation Plans (GTP), which are development strategy documents implemented every five years, aiming, among other objectives, to achieve food and nutrition security in the country.<sup>6</sup> The GTP documents of Ethiopia share many of the same goals and implementation strategies as the global FNS strategy documents. The implementation strategies outlined in Ethiopia's GTP documents include: i) increasing agricultural income, production, and productivity; ii) reducing child malnutrition and mortality; iii) building a climate-resilient economy; and iv) expanding social safety nets, among other protection programs.

The country has put in place major programs to achieve the above goals. These include the Agricultural Growth Program (AGP); the National Nutrition Program (NNP); Climate Resilient Green Economy (CRGE), Sustainable Land Management Program (SLMP), and the Productive Safety Net Program (PSNP), among others, to achieve its ambitious plan of making Ethiopia a middle-income country with zero-added carbon emissions by 2025.

These programs are at varying levels of implementation and success: The AGP, which aims to modernize the agricultural sector is in its second phase, as is the SLMP program, which primarily aims to rehabilitate degraded areas and improve rural land administration. On the one hand, the PSNP, one of the country's large-scale social safety net programs with about 8 million beneficiaries, has reached its fourth phase. On the other, the NNP and CRGE strategy are only at the early stages of implementation, though launched in 2008 and 2011, respectively. The second phase of NNP, launched in 2013, has undergone a number of revisions, and Ethiopia is set to

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<sup>5</sup> Over 40 food- and nutrition-related policy makers, experts and researchers from 18 governmental and non-governmental organizations participated in the stakeholders' engagement in the form of one-on-one interviews, focus group discussion and seminars. See list of interviewed institutions in the appendix.

launch a new national nutrition policy to build on and address policy and implementation gaps of the current NNP.

There have been a number of institutional restructurings to speed up the implementation of the country's major programs. The National Planning Commission (NPC) was established as an autonomous federal government organ in 2013, with national mandate to harmonize national-level plans, coordinate efforts to achieve sectoral targets, draft GTPs, track performance towards national, regional, and global targets such as the Comprehensive Africa Agriculture Development Programme (CAADP) and the SDGs. The former Environmental Protection Authority (EPA) has been elevated to the ministerial level with a mandate to oversee the CRGE and the SLMP programs. The National Disaster Risk Management Commission (NDRMC) is now an independent organization directly accountable to office of the prime minister. Its performance in managing recent droughts has been praised by national and international stakeholders.

There also are institutional innovations such as establishment of the Agricultural Transformation Agency (ATA) mandated to oversee the country's agricultural transformation agenda and to fill strategy gaps. In addition, the NPC, which is mandated to strengthen Ethiopia's long experience on drafting strategies, to coordinate its national targets with the SDGs; and to closely work with the donor community to achieve the GTP's objectives, was also created. Finally, NGO clustering efforts were created to address resource fragmentation and to enhance specialization of program interventions. Core Humanitarian Standard (CHS) certifications—adopted by some of interviewed stakeholders—is another instrument used to enhance quality and effectiveness of humanitarian and development works and their accountability to people and communities they serve.

Field interviews indicate that the country's FNS policy is also moving in the right direction, with agricultural policies becoming nutrition sensitive and climate smart, and shifting from farm-based interventions only to addressing constraints in the entire value chain, and strategy gaps being filled out, notably in livestock sector. GTP II, spanning an implementation period of 2015/16-2019/20, also places more emphasis on agro-industrial development, the commercialization of agriculture, and the overall productivity of agriculture sector (AGP) while at the same time promoting inclusion of small-holder farmers via better land management and safety net protections, as decreed in the SLMP and PSNP.

However, major implementation challenges remain, notably the lack of attention to detail, insufficient emphasis on the action plans of grand strategies, and poor horizontal coordination to jointly plan for and implement programs involving multi-sectoral coordination. The latter is

especially notable in the NNP and disaster-risk reduction and management. The nutrition program, though it involves nine ministries, the intervention areas of sectors other than agriculture and health, is not well-defined and remains unclear to the signatory ministries, according to interviewees. Similarly, the NDRMC's effort to mainstream risk mitigation in day-to-day planning of around 11 ministries is challenging. Getting the attention of other participating institutions at times when there is no disaster is reported to be difficult. The CRGE is also one of the programs that lacks details on action plans and the indicators to gauge and track performance, even in the GTP II document.

While institutional restructuring often empowers catalytic institutions, addressing the human capital and financial constraints of public implementing institutions, as well as their incentive structure, should equally be given due attention. Unless such constraints are tackled, scaling up innovative, often better funded, programs at national level will prove difficult.

Other more general challenges and opportunities in attracting development finance for agriculture and nutrition persist. First, the federal structure does not reach lower administrative levels in some regions. This limits local implementation capacity and impairs the sustainability of interventions. In addition, even when the federal structure is present at the local level, resources are thinly sliced among implementation units. Second, global competition for external resources, low FDI conversion rates in agricultural sector (despite various investment incentives provided for investors in the sector), macroeconomic challenges (such as inflation), and lack of export diversification all contribute to resource constraints. By contrast, new export opportunities exist for agribusiness as part of Ethiopia's push for industrial parks and export promotion. In addition, the drive to boost private investment (under the G-20's Compact with Africa initiative) offers potential as well.

With all the policy actions on the ground, the fact that Ethiopia is one of the worst-affected countries by malnutrition in the region speaks volumes about its remaining journey in achieving FNS. Even when achieving food security, which is a journey in itself considering climate risks, remaining pockets of food insecure and more-so nutrition insecure regions in the country will persist. Closing socio-economic, gender, and regional inequalities in access to food and in productive resources; addressing vulnerability to shocks, and filling in policy and implementation gaps are among the country's remaining challenges. Notably, Ethiopia needs to intensively address the policy and implementation gap of its nutrition strategy and tackle the challenge of mainstreaming nutrition and risk mitigation in other sectoral strategies. The interview insights clearly indicate where the

implementation gaps are pressing; it is our hope that this report creates the platform for various stakeholders to listen to each other's concerns.

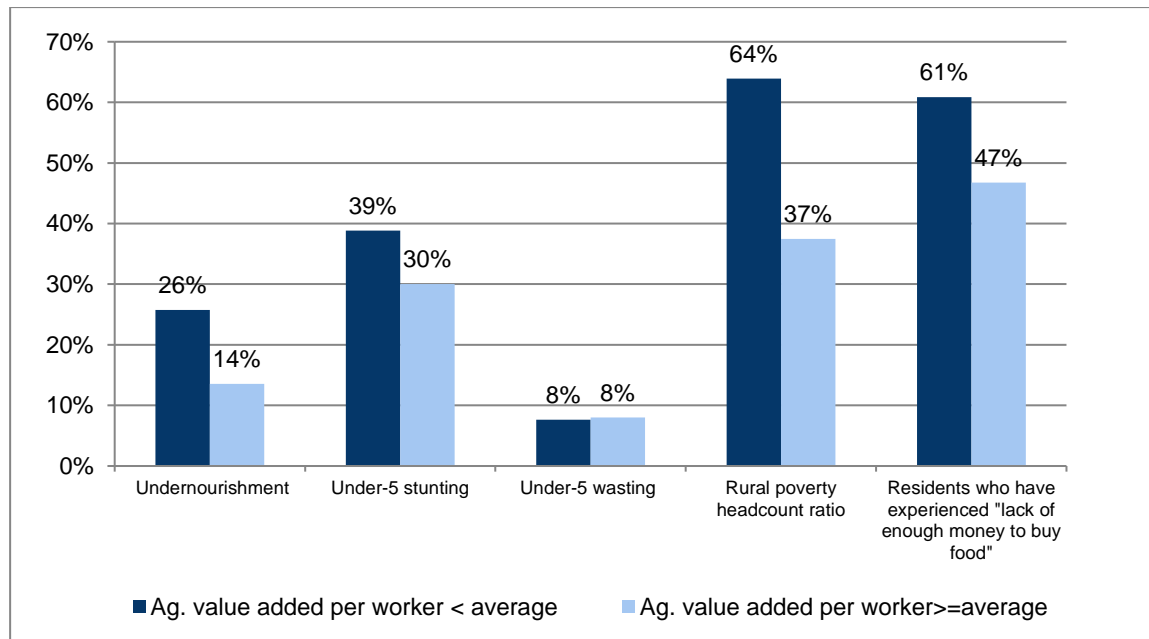
The remainder of this report is outlined as follows. Chapter 2 reviews the spatial, socioeconomic, and demographic distribution of food and nutrition insecurity in Ethiopia. Chapter 3 analyzes national development plans, the policy environment, and the government's priorities and resources for addressing FNS needs. Chapter 4 presents Ethiopia's major FNS programs and insights from interviews with on-the-ground stakeholders. Chapter 5 analyzes FNS financing in Ethiopia, while the final section concludes with policy recommendations.

## 2 Mapping Ethiopia’s FNS needs, resources, and policy environment

### The quest for FNS

Cross-country comparisons of food and nutrition insecurity, poverty, and agricultural productivity in Africa<sup>7</sup>, as seen in Figure 1, support the focus, given in global, regional, and national strategies, on reducing extreme poverty and building the resilience and productive capacity of farmers as key instruments to address food and nutrition insecurity in Africa. Countries with high agricultural labor productivity have better access to food (as measured by lower rates of *rural poverty* and *lack of money to buy food*), and, unsurprisingly then, a lower prevalence of undernourishment and child malnutrition (such as under-five stunting). Ethiopia belongs to the group of countries with below-average performance in agricultural labor productivity and food and nutrition security. Thus, improving agricultural productivity is essential to the country’s success in achieving SDG2.

**Figure 1: Agricultural labor productivity and FNS in Africa**



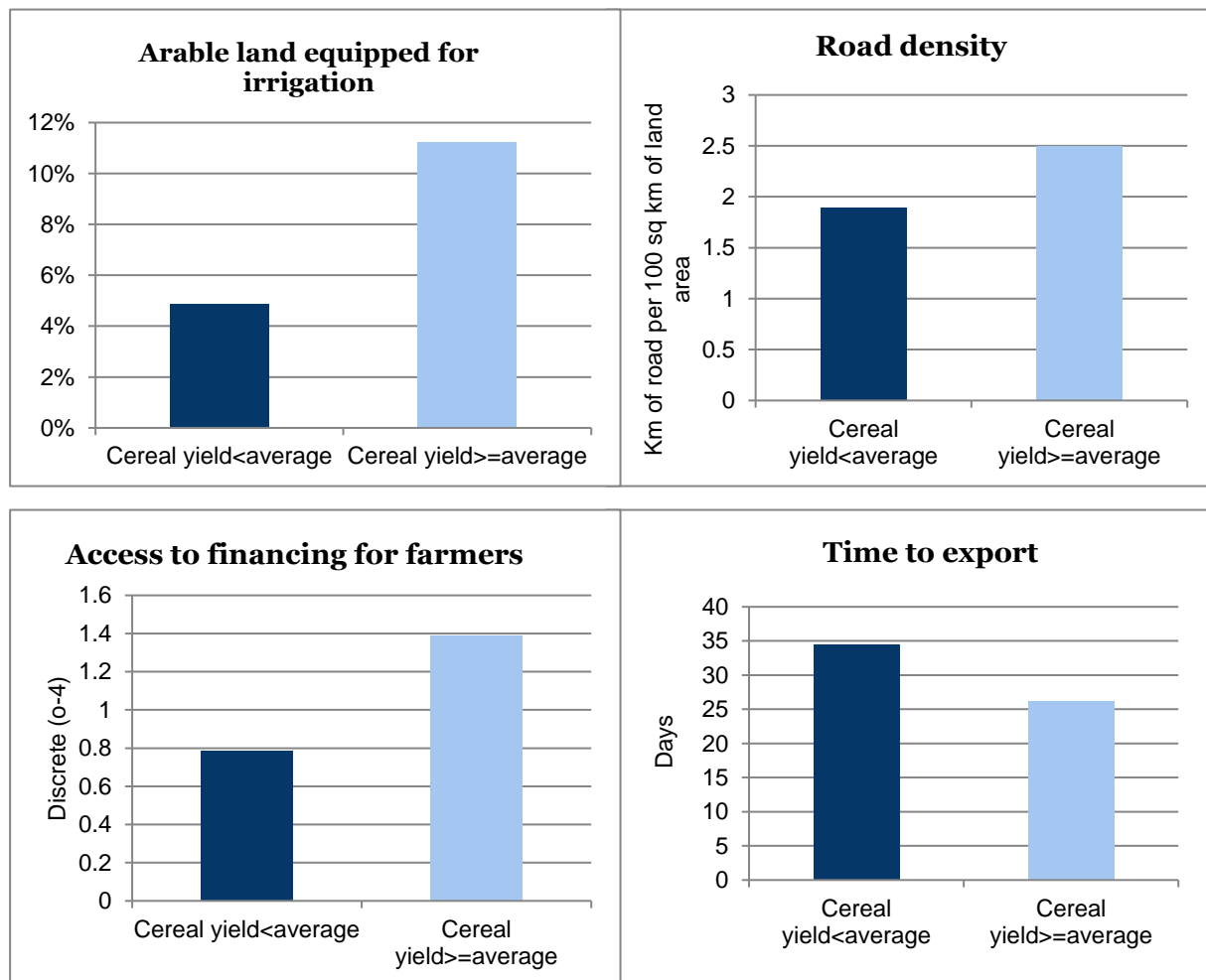
Source: Own calculations based on ERH database.

Comparisons of agricultural productivity among African countries reveal the importance of access to key agricultural inputs and enabling policy environments. As can be seen in Figures 2 and 3, countries with higher agricultural productivity (measured by cereal yield) tend to have relatively

<sup>7</sup> Africa refers to all 46 African countries covered by the Ending Rural Hunger database. For a complete list, visit <https://endingruralhunger.org/>.

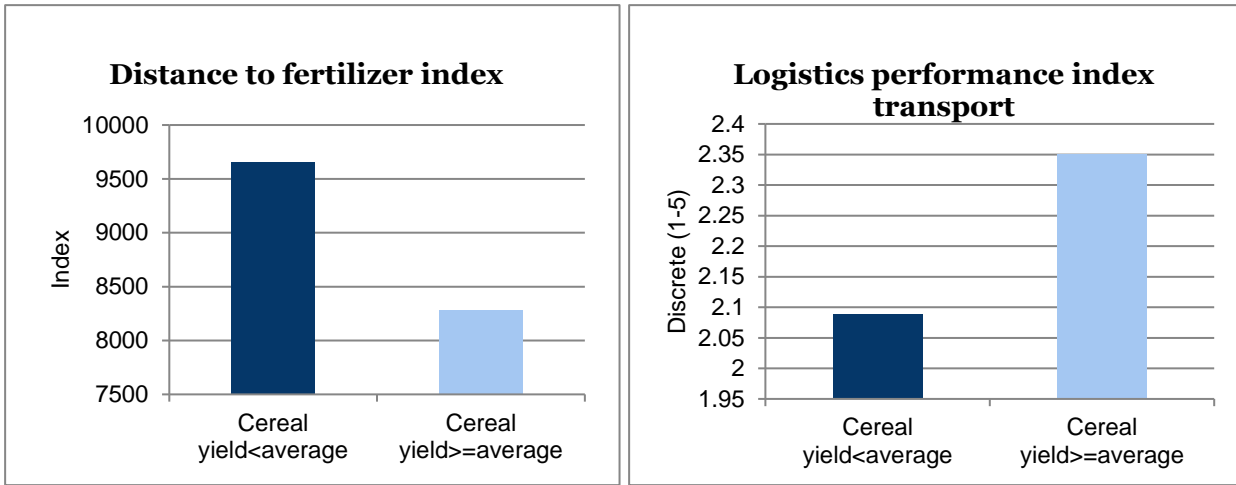
better access to key agricultural inputs—such as finance for rural farmers, fertilizer, trade- and transport-related infrastructure, and arable land equipped for irrigation (Figure 2). In addition, they rank higher in their policy commitments to strengthening agricultural productivity such as through enabling access to rural finance, land, water, extension services, and agricultural input markets (Figure 3). These comparisons suggest that some of these factors can be binding constraints to agricultural productivity.

**Figure 2: Agricultural productivity and access to inputs in Africa**



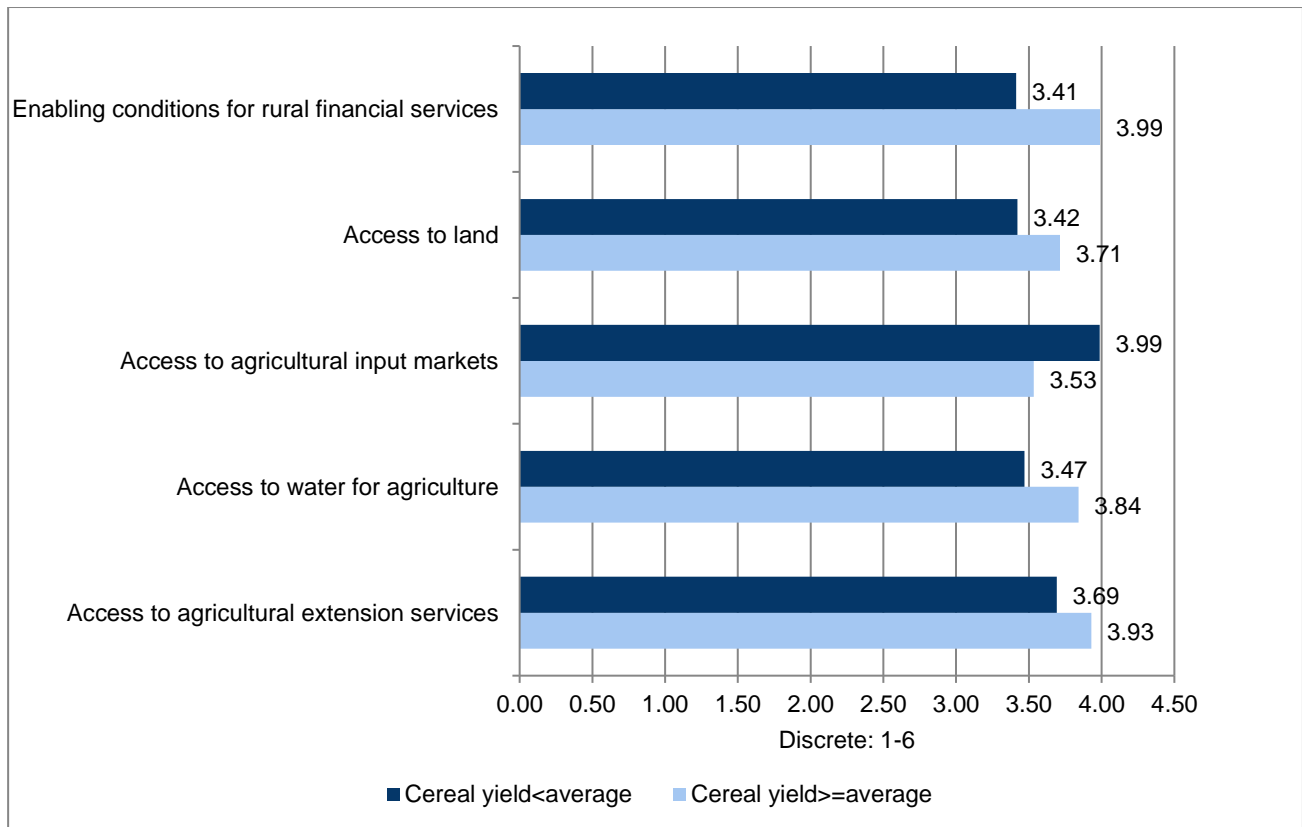


**Figure 2 (continued)**



Source: Own calculations based on ERH database

**Figure 3. Enabling policy environment for agricultural productivity**

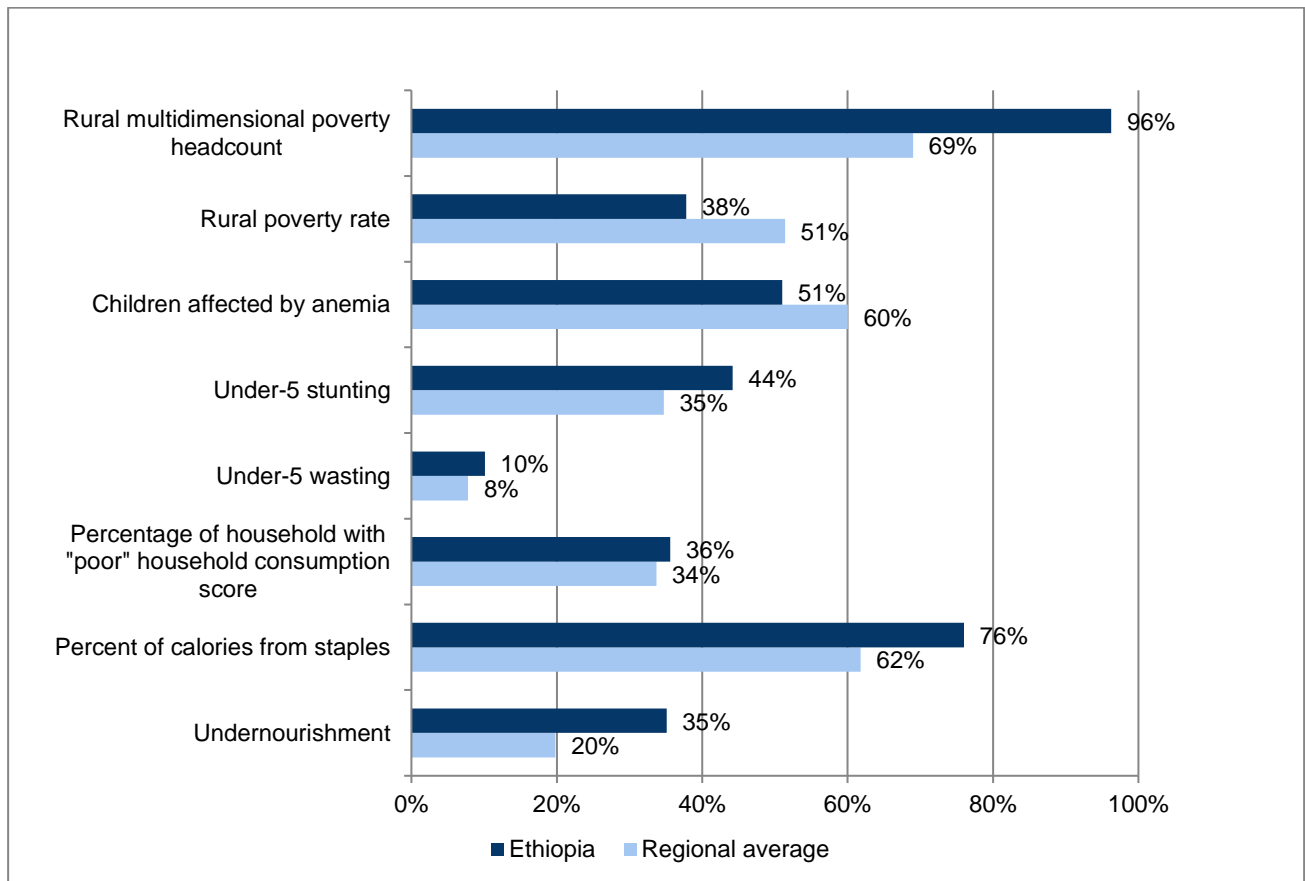


Source: Own calculations based on ERH database.

## 2.1 What are Ethiopia's FNS needs?

Ethiopia's challenges in achieving SDG2 by 2030 are remarkably great, as the country is one of the most food and nutrition insecure African countries (Figure 4). The prevalence of undernourishment and malnourishment are high even by African standards, and Ethiopia ranks as one of the 10 most-affected African countries in terms of the rural multidimensional poverty headcount.

**Figure 4. Malnutrition in Ethiopia vs. regional average**



Source: Own calculations based on ERH database.

According to the ERH report, 35 percent of the population in Ethiopia is exposed to the risk of undernourishment due to insufficient food consumption to meet daily energy requirements—compared to the African average of 20 percent. Lack of dietary diversity is common, as can be seen from higher dependence on staple foods, lower protein consumption, and a higher share of the population that falls into the “poor” food consumption score (FCS) category.<sup>8</sup> According to

<sup>8</sup> The FCS score is a measure of the frequency of consumption of different food groups consumed by a household during the seven days before the survey. The indicator measures the percentage of the national population that falls into a “poor” FCS score category and “borderline” category.

ERH's ranking of food security needs over the period 2009-2013, Ethiopia ranks 102 (out of 115 countries) and 90 (out of 109 countries for which data was available) in calorie gap and dietary diversity, respectively, indicating that these should be two of the highest priority areas to accelerate the country's efforts to achieve SDG2. In relation to the other African countries in the sample, Ethiopia is among the bottom 10 countries in four of the six measures of calorie gap and dietary diversity (Table A1a in the appendix).

Various factors contribute to the high prevalence of food and nutrition insecurity in the country. For example, in Ethiopia, 42 percent of respondents to a Gallup World Poll reported that they have experienced a lack of enough money to buy food during the past 12 months prior to the survey period. In addition, 38 percent of Ethiopia's rural population lives under the \$1.25 a day poverty line. When taking health, education, and other dimensions of living standards into account, nearly all (96 percent) of the rural population live with multiple deprivations (Figure 4). Unsurprisingly, then, Ethiopia ranks among the 10 countries in sub-Saharan Africa with the highest rates of multidimensional poverty.

Looking at national child malnutrition rates, under-five stunting and anemia in children are the two most prevalent forms of childhood malnutrition in Africa. Not only does Ethiopia belong to the 10 lowest-performing countries in sub-Saharan Africa in under-five stunting and wasting but one in every two children under the age of five is also affected by anemia.<sup>9</sup> Indeed, Ethiopia's rates of stunting and anemia in children are beyond the global critical threshold (40 percent) outlined by the WHO. Various studies have shown that the costs associated with childhood malnutrition are very high and the consequences are long term if left unchecked. The good news is that trends of child malnutrition rates in Ethiopia have showed marked progress over the past 15 years. According to recent DHS report, the prevalence of stunting and underweight children decreased by 20 percentage points (from 58 percent to 38 percent) and 17 percentage points (from 41 percent to 24 percent) between 2000 and 2016, respectively. Ethiopia also reached the MDG target for under-five mortality (68 per 1000 live births) one year prior to 2015, though the target of reaching MDG goal of reducing prevalence rate of underweight children to 14 percent was not achieved (WHO, 2014; DHS, 2017). Ethiopia also suffers from micronutrient deficiencies such as in zinc, vitamin A, and iodine, which the WHO deems public health problems. Fifty-two and 34 percent of women of reproductive age are iodine and zinc deficient, respectively (EPHI, 2016).

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<sup>9</sup> Another problematic area of childhood malnutrition in Ethiopia is being underweight (weight-for-age). According to DHS (2011), 29 percent of children score two standard deviations below the average weight for their age.

## 2.2 Understanding FNS need heterogeneities for better policy targeting

Understanding the spatial and socio-economic characteristics of the populations most affected by food and nutrition insecurity not only facilitates targeting, it also guides the nature of policy interventions required to achieve SDG2. To this end, we present the demographic, socioeconomic, and spatial composition of the populations most affected by food and nutrition insecurity in Ethiopia.

Table 1 compares food consumption and dietary diversity measures among various groups of households by place of residence and gender using the 2011 Ethiopian Demographic and Health Survey (DHS). Comparisons among rural and urban households reveal that rural households consume higher calories per adult equivalent per day on average, but suffer from lower dietary diversity.<sup>10</sup> Rural areas also have a significantly higher proportion of households with low access to food (i.e., those falling below absolute poverty line and belonging into the lowest quintile of expenditure per capita) compared to their urban counterparts, suggesting that focusing on food and nutrition insecurity in rural areas should be a particular priority.

**Table 1. Urban-rural distribution of food security and nutrition insecurity**

| Indicator                 | Unit  | Rural | Urban |
|---------------------------|---|-------|-------|
| Diet quantity             | Mean kilocalories per adult equivalent per day                                | 3164  | 2985  |
|                           | Consumption < 2550 kcal / adult equivalent / day (% of households)            | 40%   | 42%   |
| Diet quality              | >75% of total household calories coming from starch staples (% of households) | 58%   | 20%   |
|                           | Low dietary diversity (<=3 food groups over 7 days) (% of households)         | 34%   | 16%   |
| Food consumption adequacy | Poor or borderline food consumption (% of households)                         | 29%   | 17%   |
| Child malnutrition        | Height-for-age (stunting, % below 2 SD)                                       | 46.2% | 31.5% |
|                           | Weight-for-height (wasting, % below 2 SD)                                     | 10.2% | 5.7%  |
|                           | Weight-for-age (underweight, % below 2 SD)                                    | 30.4% | 16.3% |
|                           | Any anemia (<11.0 g/dl)   | 45.4% | 35.2% |
|                           | Women (%<17)  | 9.7%  | 7.2%  |

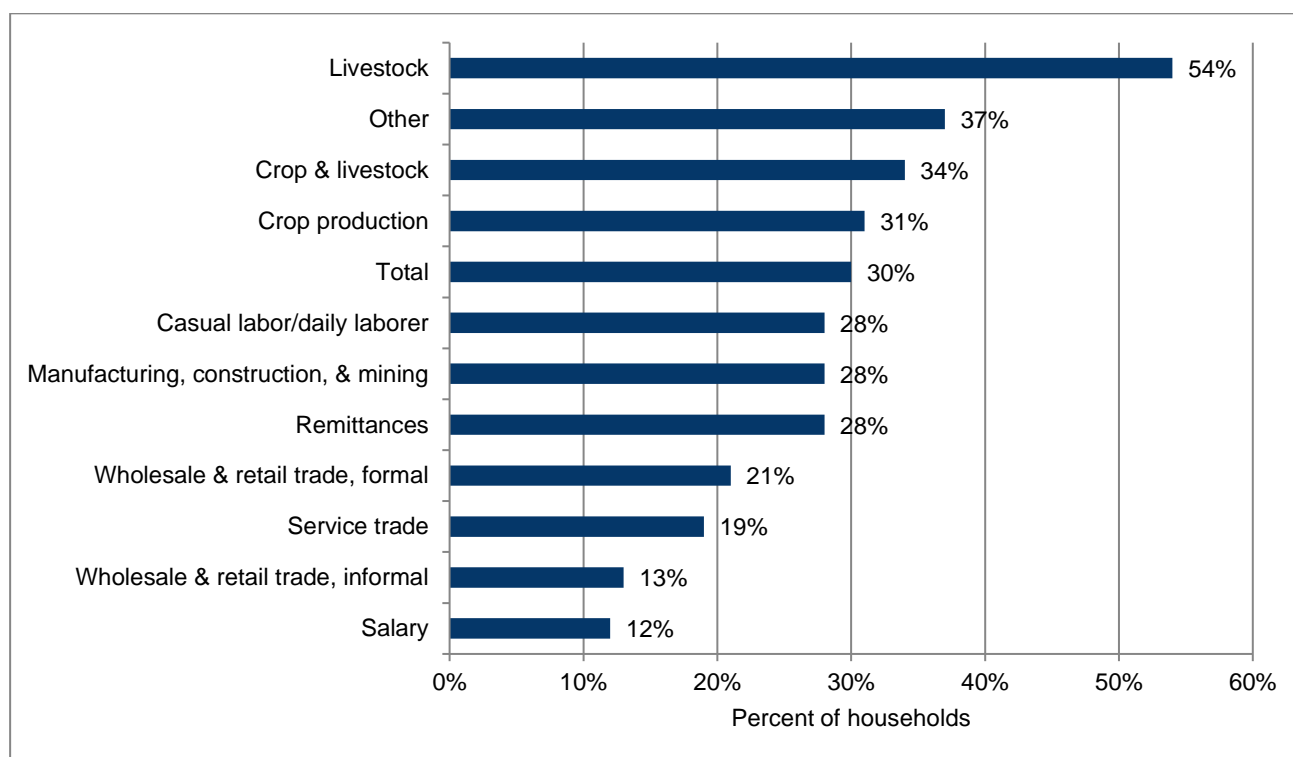
<sup>10</sup> Rural Ethiopia has larger proportion of households obtaining more than 75 percent of total household calorie consumption from starch staples (58 vs 20 percent), and higher proportion of households consuming fewer than three food groups over seven days (34 vs 16 percent).

|   |   |       |       |
|---|---|-------|-------|
| <b>BMI&lt;17 (moderately and severely thin)</b> | Men (%<17)  | 14.8% | 10.9% |
| <b>Economic vulnerability</b>                   | Below absolute poverty line (% of households)                   | 24%   | 19%   |
|   | 65% or more of total expenditures on food (% of households)     | 14%   | 5%    |
|   | Lowest total expenditures per capita quintile (% of households) | 24%   | 4%    |

Source: CFSVA 2014, DHS (2011).

As seen in Figure 5, sources of livelihood matter for households' state of food security. Food-producing households, constituting 91 percent of rural households covered in the 2011 Household Consumption and Expenditure (HCE) and Welfare Monitoring Surveys (WMS), are less likely to consume diversified foods than non-food-producing households. This has to do with the fact that most food producers are subsistence farmers and pastoralists whereas traders and salary workers are more likely to be net buyers of food, with the option of buying different types, and to have steady income. Thus, more stable and diversified sources of livelihoods often provide better food security.

**Figure 5. Percent of households with low dietary diversity, by livelihood**



Source: HCE and WMS, 2011.

The regional distribution of rural food and nutrition insecurity (see Table A2 in the Appendix) indicates that the Tigray, Amhara, and Somali regions have above-average shares of rural households consuming less than 2550 kcal per day and facing low dietary diversity. Moreover, the prevalence rate of under-five stunting is higher than the global critical threshold for two (Tigray and Amhara) of the three aforementioned regions (Table A3). A high prevalence rate of anemia in children is common across all the regions of the country, and, even in the regions performing well, still hovers near the critical threshold. Both adult and child malnutrition rates in Ethiopia decline with wealth, indicating that greater household incomes are linked to better access to food and dietary diversity (Table 2).

**Table 2. Distribution of adult and child malnutrition by wealth quintile**

| Wealth quintile | Starch staples (%) <sup>*</sup> | Low dietary diversity (%) <sup>**</sup> | Height-for-age (stunting, % below 2 SD) | Weight-for-height (wasting, % below 2 SD) | Weight-for-age (underweight, % below 2 SD) |
|-----------------|---------------------------------|---|---|---|--|
| <b>Lowest</b>   | 66                              | 53                                      | 49.2                                    | 12.1                                      | 35.6                                       |
| <b>Second</b>   | 62                              | 40                                      | 47.7                                    | 12.3                                      | 33.2                                       |
| <b>Middle</b>   | 55                              | 27                                      | 45.6                                    | 9.4                                       | 28.8                                       |
| <b>Fourth</b>   | 46                              | 17                                      | 45                                      | 7.7                                       | 25.8                                       |
| <b>Highest</b>  | 21                              | 12                                      | 29.7                                    | 5.1                                       | 15.1                                       |
| <b>Total</b>    | <b>50</b>                       | <b>30</b>                               | <b>44.4</b>                             | <b>9.7</b>                                | <b>28.7</b>                                |

Source: DHS (2011). <sup>\*</sup> Measures percentage share of households that have more than 75 percent of total calories coming from starch staples. <sup>\*\*</sup> Measures percentage share of households consuming fewer than three food groups over 7 days.

### 2.3 Vulnerability to production, consumption, and environmental shocks

In settings where subsistence, small-holder farming is the dominant form of food production, both market- and production-related shocks threaten rural households' access to and supply of food, depending on their excess demand or supply of food. Net buyers of food suffer limited access to food during high price seasons. Net sellers of food, on the other hand, will be affected by income/livelihood shocks when prices of their produce are low and when market- and climate-related shocks adversely affect production. According to the latest agriculture sampling survey report of Ethiopia, small-holder farmers produced 95 percent of the country's total grain output in the 2016/17 cropping seasons (CSA, 2017) and sold just 15 percent of their agricultural produce on average, making subsistence farming the dominant form of agricultural livelihood in rural Ethiopia (CSA, 2017).

Table 3 shows that Ethiopia ranks among the 10 most vulnerable countries to food price shocks in sub-Saharan Africa due to a combination of the high share of food expenditure within household

budgets and high (domestic) food price volatility. According to the DHS (2011) report, 14 percent of rural households spend more than 65 percent of their household income on food expenditures (Table 1). Imported food price volatility adds to domestic food price instability. As 2017 comes to a close, food prices have declined. The drop was driven by the decline in dairy prices. Moreover, the FAO predicts that, in 2018, cereal production, such as rice and coarse grains, and inventory levels will reach record highs due to an expansion in production in South America and Southern Africa.<sup>11</sup>

**Table 3. Consumption and income volatility and rural safety nets in Ethiopia**

| Indicators                                | Unit  | Ethiopia | Regional average | Global ranking | Sub-Saharan Africa comparison |
|---|---|----------|------------------|----------------|-------------------------------|
| <b>Consumption and income shocks</b>      |   |          |                  |                |                               |
| Household exposure to food price shocks   | Index   | 564.32   | 500.79           | 58             | Bottom 10                     |
| Income diversification                    | (% share of non-farm income in total income of rural farm households) | 7.4      |                  |                |                               |
| <b>Rural safety nets</b>                  |   |          |                  |                |                               |
| Number of food safety net programs        |   | 1        | 0.95             | 48             |                               |
| Social safety net coverage                | Percent   | 17.74    | 26.13            | 60             |                               |
| <b>Productivity and production shocks</b> |   |          |                  |                |                               |
| Agricultural TFP growth (1961-2010)       | Percent   | 2.11     | 1.22             | 45             |                               |
| Agricultural value added per worker       | Constant 2005 USD, logged   | 5.51     | 6.54             | 100            |                               |
| Cereal yield                              | kg per hectare  | 1948     | 1485             | 65             |                               |
| Variation in cereal crop yields           | Tons per hectare  | 0.25     | 0.21             | 89             |                               |

Source: Own calculations based on ERH database.

Furthermore, production shocks prompted by extreme weather events also contribute to vulnerability among farmers in Ethiopia. For example, in August 2017, the Ethiopian government and its humanitarian partners published a report indicating that 8.5 million people will require emergency food

<sup>11</sup> See: FAO, "FAO Food Price Index eases in October as dairy prices decline" November 2, 2-17. Available at <http://www.fao.org/news/story/en/item/1053495/icode/>

assistance because of the poor performance of the spring *belg* rains in many parts of the country.<sup>12</sup> Analysis of long-term climate trends indicates that annual rainfall has declined slightly since the mid-1990s—although regional variation exists (WFP, 2014). Projections suggest that temperatures will steadily rise over the next several decades and both droughts and flooding will increase (Mahoo et al., 2013). Additionally, population pressures could increasingly degrade and constrain land and water resources, exposing more people to disasters and adversely affecting their ability to meet their food and nutrition requirements, according to Ethiopia’s National Meteorological Agency (NMA, 2007).

These uncertainties, especially in light of climate change, underscore the need to invest in consumption-smoothing mechanisms, such as rural safety nets, and income-smoothing mechanisms, such as agricultural crop insurance, income diversification,<sup>13</sup> commodity exchange markets (to enable farmers to track food price trends so they stock when prices are low and sell when they are high), as well as encourage a culture of saving—which will equally require promoting formal and informal banking institutions. Food and social safety net programs in Ethiopia do not adequately cover the needs of even the poorest of the poor. As can be seen from Table 3, just 17.7 percent of the poorest 20 percent of the rural population is currently participating in social assistance programs. Safety net programs also primarily target food insecure households to prevent asset depletion and bridge food shortages during off-farming seasons. Thus, Ethiopia needs to look beyond these insurance mechanisms and build the productive capacity of agriculture to achieve a diversified rural economy in the long term.

## 2.4 Agricultural Productivity Gap

As seen in Table 3, agricultural production in Ethiopia is also characterized by low average labor productivity and volatile crop yield for cereal production, which constituted 87 percent of the total grain production for small-holder farmers and 73 percent for commercial farms during the 2016/2017 production year, respectively (CSA, 2017).

Agricultural productivity figures in Table 3 indicate that, despite its above-average growth performance in total factor productivity (TFP) over the 1961-2010 period, Ethiopian cereal yield is volatile, and labor productivity in the sector is below the regional average (even lower than the

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<sup>12</sup> See Joint Government and Humanitarian Partners’ 2017 Ethiopia Humanitarian Requirements Document (Mid-Year Review): [https://reliefweb.int/sites/reliefweb.int/files/resources/ethiopia\\_humanitarian\\_requirements\\_document\\_mid-year\\_review\\_2017.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/ethiopia_humanitarian_requirements_document_mid-year_review_2017.pdf).

<sup>13</sup> According to the FAO (2012), just 7.4 percent of income of rural farm households comes from non-agricultural wages and self-employment in 2012, indicating low income diversification. See: Food and Agriculture Organization, “Agricultural Development Economics,” 2012. Available at: <http://www.fao.org/economic/esa/esa-activities/esa-small-holders/dataportrait/constraints/en/>.



bottom 25th percentile of productivity distribution in Africa).<sup>14</sup> Since labor productivity is often a strong predictor of living standards of workers, as more productive farmers tend to have higher take-home income that they can spend on food consumption and other household expenditures, these trends are concerning.

Various factors seem to limit the productive capacity of Ethiopian farmers, including limited access to finance, infrastructure (with road density of just 3 km for an area of 100 sq. km), agricultural technology (i.e., area devoted to modern varieties and irrigation),<sup>15</sup> and few qualified agricultural researchers (Table 4).<sup>16</sup> In addition, high dependence on rain-fed agriculture in the face of limited renewable water resources subjects the country to production and environmental shocks. Ethiopia also performs below average in access to trade-related infrastructure (measured by the number of days it takes to export and a general measure of the quality of trade and transport logistics). It is important to address these trade barriers to increase income (through improved access to wider markets) and improve productivity (through increased competition and exposure to global productivity-enhancing best practices).

**Table 4. Access to productivity enhancing inputs in Ethiopia**

| Key input indicators                        | Ethiopia | Regional average | Global ranking | Sub-Saharan Africa comparison |
|---|----------|------------------|----------------|-------------------------------|
| Access to financing for farmers             | 1        | 1.125            | 51             |                               |
| Road density                                | 3.0      | 8.50             | 110            | Bottom 10                     |
| Distance to fertilizer index                | 7653.3   | 9085.7           | 67             |                               |
| Arable land equipped for irrigation         | 1.95     | 7.49             | 92             |                               |
| Total renewable water resources per capita  | 1330     | 13061            | 92             | Bottom 10                     |
| Percent of area devoted to modern varieties | 13.69    | 21.35            | 21             |                               |
| Share of researchers with PhD               | 2.2e-06  | .0000132         | 48             |                               |
| Share of female researchers                 | 2.3e-06  | 9.99e-06         | 42             |                               |

<sup>14</sup> Notably, interviewed respondents from the Agricultural Transformation Agency, contended that findings from the ERH database underestimate the performance of the agriculture sector by focusing too heavily on crop farming and overlooking contributions from the livestock sector.

<sup>15</sup> Another ERH indicator on science and technology looks at agricultural R&D expenditure as a percent of agricultural GDP. Under that indicator, we see that, in Ethiopia 0.2 percent of Agricultural GDP is dedicated to R&D, against 0.7 percent in sub-Saharan Africa.

<sup>16</sup> The Alliance for a Green Revolution in Africa, an organization founded amid Kofi Annan's call for an African "Green Revolution" was created in 2006 through a Gates Foundation and Rockefeller partnership. The group has funded 14 PhDs in Plant Breeding, 3 PhDs in agronomy, 37 MScs in Crop Science and 12 MScs in soil science, in the aim to improve research output.

|                      |       |       |    |           |
|----------------------|-------|-------|----|-----------|
| Time to export       | 45.4  | 30.98 | 98 | Bottom 10 |
| Logistic performance | 1.995 | 2.20  | 98 | Bottom 10 |

Source: Own calculations based on ERH database.

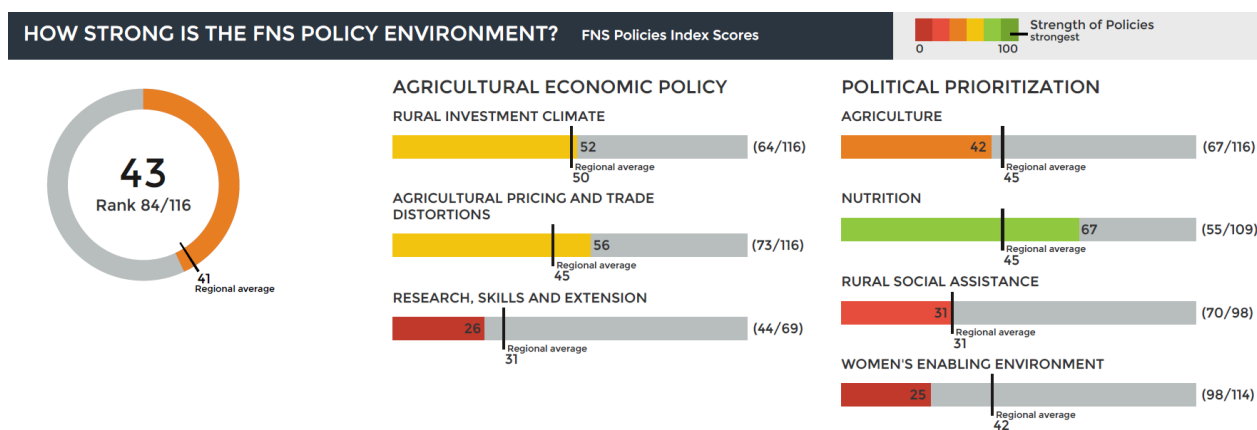
## 2.5 Ethiopia's FNS policy environment: ERH ranking

Ethiopia ranks among the top 10 African countries in terms of the extent to which government documents fully recognize the importance of access to finance for farmers, equitable management of water for agriculture, and general measures of the rural investment climate (see Table A1b. in the Appendix).

ERH's ranking of political prioritization of FNS in public policy documents puts Ethiopia's nutrition policy as its top priority. At the same time, Ethiopia's policy commitments on agriculture, rural social assistance, women's enabling environment, and research, skills, and extension are identified as areas where gaps—relative to the regional averages and global best practices—are the highest (Figure 6).

Despite agriculture's purported prioritization in policy documents, the country's agricultural performance remains weak along a number of dimensions. Notably, actual coverage rates in irrigation indicate that Ethiopian agriculture is still heavily dependent on rain-fed agriculture in the face of limited renewable water resources. Moreover, poor infrastructure (notably road density) also constrains access to local and international markets for agricultural products and inputs. Furthermore, access to finance in rural areas is limited, and the total agricultural area devoted to modern varieties of crops is below the sub-Saharan African average (Table 4).

**Figure 6. ERH ranking on Ethiopia's FNS-related policy environment**



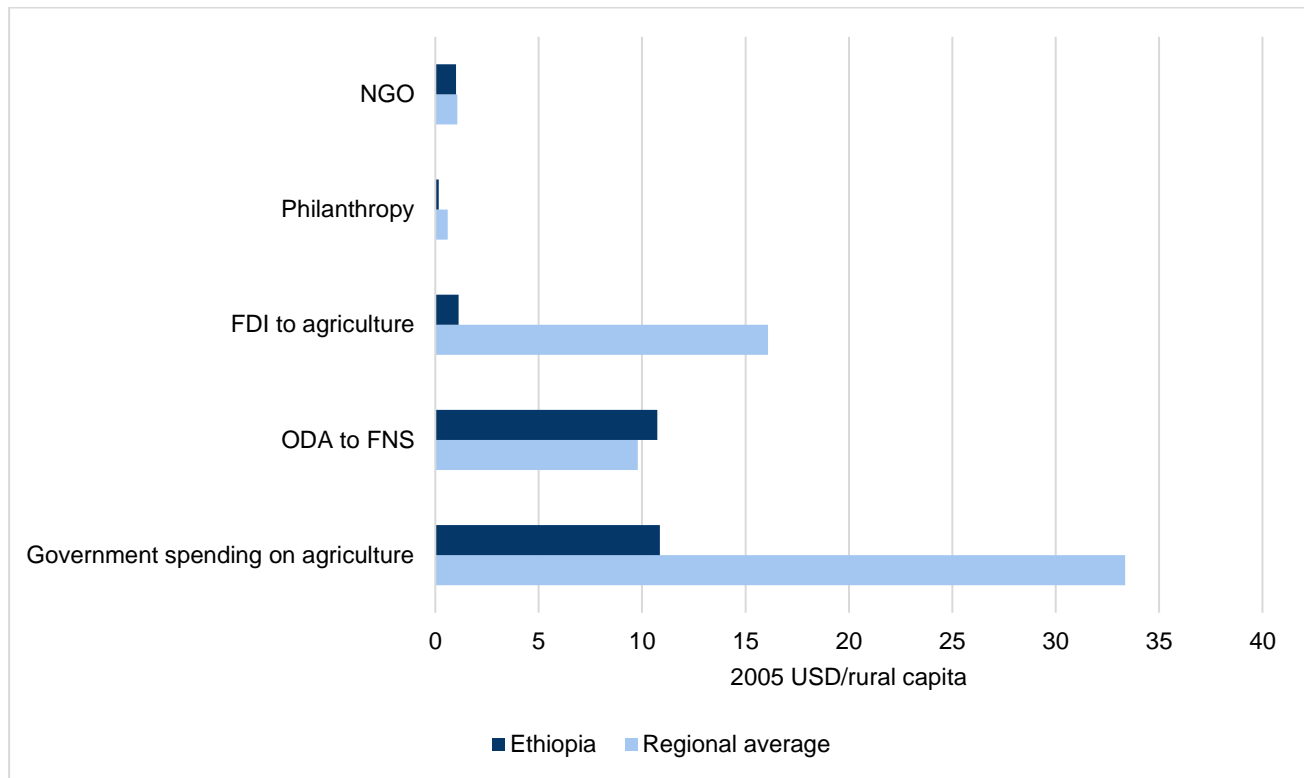
Source: ERH database.

## 2.6 Ethiopia's FNS resources: Unlocking the paradox

ERH's ranking of resources (local and external) allocated to addressing food and nutrition security needs reveals that Ethiopia's government spending on agriculture is far below the regional average (\$10.60 per rural capital compared to \$33.36). While about the same amount (\$10.73) is spent using official development assistance (ODA), Ethiopia's reliance on traditional aid funding is actually slightly higher than the region's (Figure 7). Compared to the regional average, FDI is by far the most under-exploited source of funding in the sector.

Given the high share of foreign resources in FNS financing, it seems that resource constraints and resource mobilization are among the major challenges of FNS financing efforts of Ethiopian government. Beyond these resource gaps, on-the-ground implementation challenges, misallocation of resources, and low adoption rates of nutrition guidelines and agricultural best practices can potentially explain the disconnect between relatively strong policy commitments on one hand and limited access to key agricultural inputs and high food and nutrition insecurity on the other. As further discussed in Chapter 4, many of the interviewed stakeholders, for instance, stated their concerns regarding the implementation of the existing policies. Despite strong policy scores, the country has significant strides to make in implementing policies across levels of government, especially when coordinating with implementing bodies in lower levels of government. Additionally, stakeholders from the National Planning Commission stated that the low level of awareness of FNS issues and existing accountability gaps on the implementers' side are also challenges.

**Figure 7. Ethiopia's resource gap vs. the regional average**



Source: Own calculations based on ERH database.

## 3 Country strategy to achieve FNS

### 3.1 Overview of country development strategy and planning process

Ethiopia adopted its Agricultural Development Led Industrialization (ADLI) strategy in the early 1990s. The philosophy of the ADLI is that agricultural development plays a leading role in industrialization by improving productivity of small-holder agriculture and by creating linkages with the industrial sector. Since then, a number of five-year development strategy documents have been drafted and implemented within the ADLI framework, Ethiopia's Growth and Transformation Plans (GTP) being the latest of such documents. Reflecting the country's stage of development, the first GTP (GTP I), from 2010-2015, focused on agriculture and rural development as engines of economic growth while GTP II aims to achieve structural transformation and promote economic diversification by supporting export-oriented industries with strong linkages to agriculture.

Spanning an implementation period of 2015/16-2019/20, GTP II aims to speed up industrialization, achieve structural transformation, and promote economic diversification by supporting export-oriented industries (such as garments, leather, and footwear) that have strong linkages with agriculture through the expansion of agro-industrial parks.<sup>17</sup> According to the GTP II document, agriculture will continue to be an engine of growth in the economy during its implementation period. Promoting productivity in staple crops, high-value crops, export commodities, and irrigation-based agriculture will remain a priority, with an added emphasis on addressing constraints such as agricultural marketing system failures, to facilitate collaboration between small-holder farmers and the private sector.

In 2013, the government established the National Planning Commission (NPC)—formerly a branch of Ministry of Finance and Economic Cooperation (MoFEC)—as an independent organization dedicated to producing national development plans, aligning national plans with international commitments, and coordinating sectoral targets. To prepare the GTP documents, sectors submit their plans to the NPC, which are then compiled into the national GTP. The NPC monitors progress on these plans and provides solutions when policy and implementation gaps arise.

The draft GTP II documents, along with the progress and implementation challenges of and lessons drawn from GTP I, were presented by the NPC at various consultative meetings with development partners and civil society and then adopted by the government in May 2016. GTP II

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<sup>17</sup> To this end, 7 million square meters of land is planned to be allocated for expansion of four pilot agro-industrial parks under GTP II period (GTP II, page 29).

serves as a blueprint for development cooperation and coordination of interventions between the government of Ethiopia and various non-governmental stakeholders. The MoFEC also uses GTP targets as a basis for budget allocations across sectors and regions.

The NPC is also mandated to coordinate the national plan with global targets such as the SDGs.<sup>18</sup> In 2017, the NPC performed a voluntary national review to evaluate the alignment of Ethiopia's development targets with and progress toward achieving the SDGs. It found that the pro-poor and pro-growth policies, strategies, plans, and programs, as well as the climate resilient green economy strategy do indicate the country's strong commitment to implementing the SDGs. It further notes that agriculture and health extension programs have been effectively implemented—suggesting some successful early progress on these targets of the SDGs—although climate change-induced drought poses significant challenges to human development objectives in the country.

### 3.2 Review of food and nutrition security strategy of Ethiopia under GTP I (2009/10-2014/15)

Maintaining rapid and equitable economic growth and achieving the MDGs were the main objectives of the development strategy of GTP I.<sup>19</sup> In line with the country's overall development strategy, one of the main strategic pillars of GTP I was to maintain the agricultural sector as a major source of economic growth while creating conditions for industry to play a key role in the economy. Attaining the MDG goals of the social sectors such as education and health was given special emphasis in GTP I documents.<sup>20</sup>

The development goals were also linked to specific measurable targets and implementation strategies for the main productive sectors of the economy. The targets for agriculture and rural development, health, and infrastructure reveal the priorities of the Ethiopian government towards FNS, whereas its overall performance reflects its constraints. The implementation strategies related to food security included increasing agricultural income, production, and productivity; reducing poverty, child malnutrition, and child mortality; and building a climate-resilient economy and social safety nets, among others. Notably, given that GTP I was created to align closely with the MDGs—the precursor to the SDGs—GTP I also aligns closely with the SDGs on several targets, with which it briefly overlapped in 2015. For example, the aforementioned implementation

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<sup>18</sup> Meanwhile, sectors mainstream sector-specific regional targets such as CAADP.

<sup>19</sup> Attaining MDG goals of the social sectors such as education and health was given special emphasis in GTP I documents. See Table A4 for selected macroeconomic and sectoral targets of GTP I.

<sup>20</sup> Investments in infrastructure and social programming (such as the promotion of gender and youth empowerment) also belong to the list of strategic pillars to attain rapid and equitable economic growth.

strategies are similarly mentioned in the targets of Goals 1, 2, 3, 6, 8, and 13 of the SDGs, in addition to the Malabo Declaration objectives as essential to addressing food and nutrition security.<sup>21</sup>

Increasing production and productivity of small-holder farmers and pastoralists was one of the implementation strategies of GTP I to achieve food and nutrition security. For instance, the plan aimed to increase the productivity of the crop and livestock sectors by increasing the supply of key agricultural inputs (such as cultivable land, modern seeds, fertilizer, and improved animal breeds and fodder), improving plant and animal health, and scaling up agricultural best practices (through improvement in utilization of extension services and enhancing the skills of agricultural researchers) (GTP I, pages 20-21). These objectives correspond with the SDG goal of doubling agricultural productivity among small-holder farmers and the Malabo Declaration targets of sustaining agricultural GDP growth of at least 6 percent and accelerating agricultural growth by at least doubling current agricultural productivity by 2025.

Increasing the income of agricultural households through greater involvement of the private sector in production as well as the exporting of high-value agricultural products (such as horticultural goods, cotton, coffee, and spices) is another strategy for achieving food security, as outlined in GTP I. To this end, the government adopted the **Universal Rural Road Access program**, which resulted in a significant increase in road density, a reduction in the average time it takes to reach the nearest all-weather roads, and promotion of agro-processing industries with strong backward linkages to agriculture.<sup>22</sup> This GTP I strategy also relates to SDG2, which targets include an increase in investment in rural infrastructure, as well as the Malabo Declaration targets that strive to drive promote sustainable and reliable production and boost investment in markets and trade infrastructure, both of which depend on suitable road infrastructure.

Moreover, decreasing the percent of the population living below the poverty line and ensuring food security at the household level through increasing the coverage of farmers benefiting from safety net and household credit programs are other strategies that the GTP I outlines. These strategies correspond with SDG1, which calls for an end to poverty, and SDG8, which focuses on inclusive growth and employment opportunities. Furthermore, the Malabo Declaration promotes inclusive agricultural development by calling for countries to ensure that at least 50 percent of agricultural

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<sup>21</sup> See Table A5 for food and nutrition security-specific targets of GTP I and how they overlap with the regional and global targets set by the Malabo declaration and SDG2.

<sup>22</sup> As seen in Table A4, total road length grew to almost 2.5 times its level in 2009 and average time it takes to reach an all-weather road declined by almost a half from its baseline level

growth contributes to the overall poverty reduction target. It also calls for African countries to support women and youth interested in economic opportunities in agri-business.

Building resilience to environmental shocks and expanding social safety nets are integral parts of the plan for achieving sustainable rural development. Thus, GTP I also marked the adoption of the **Climate Resilience Strategy**. The government's efforts to increase preparedness for and responses to environmental shocks range from investments in small-, medium-, and large-scale irrigation development to strengthening natural resource and bio-diversity conservation to the uptake of climate change adaptation and mitigation technology. SDG2 similarly calls for the implementation of resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality by 2030. SDG6 goes further, calling on countries to “ensure availability and sustainable management of water and sanitation for all”. The Malabo Declaration also highlights water management systems as crucial to natural resource conservation. It strives to enhance investments for resilience-building initiatives (including social security for rural workers and other vulnerable social groups, as well as for vulnerable ecosystems); mainstream resilience and risk management in policies, strategies, and investment plans; and ensure that, by the year 2025, at least 30 percent of African farm, pastoral, and fisher households are resilient to climate change and weather-related risks.

Finally, GTP I outlines **disaster mitigation and management strategies** to reduce vulnerability to shocks. Risk preparedness mechanisms include risk profiling of woredas<sup>23</sup> in an effort to enhance systems of early warning through woreda networks, and increasing food and non-food reserves and contingency budgets. Efforts to ensure household-level food security during a disaster include a population resettlement program and productive safety net programs coupled with family-level credit packages in order to build household assets and increase incomes of food-insecure households. Ultimately, the intention is to ensure graduation from the safety net program. Similarly, in response to climate-related disasters, the Malabo Declaration calls for strengthening strategic food and cash reserves to respond to food shortages occasioned by periodic prolonged droughts or other disasters/emergencies; strengthening early warning systems to facilitate advanced and proactive responses to disasters and emergencies with food and nutrition security implications; and targeting priority geographic areas and community groups for intervention.

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<sup>23</sup> The kebele is the smallest administrative unit in Ethiopia, while the woreda is the next largest, formed by a collection of kebeles.



SDG13 also aims to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Other sectors closely related to FNS such as health and infrastructure are also included in the plan. Implementation strategies in health include improving maternal health and longevity as well as reducing child malnutrition and mortality by ensuring improved health service delivery. These GTP targets correspond with SDG3 (“end preventable deaths of newborns and children under 5 years of age”) as well as the Malabo objective of reducing child mortality. Implementation strategies in the infrastructure sector include increasing the construction of roads, power, and communication services as well as improving the quality of and access to safe drinking water and sanitation services.

### 3.3 Performance and constraints of GTP I and outlook of GTP II

Table 5 tracks the progress of Ethiopia towards some of GTP I’s targets specific to agriculture and rural development. The country’s performance has been mixed. For example, Ethiopia achieved and surpassed the targets regarding the annual growth rate of the agricultural sector and its allied activities, land rehabilitation, and community-based water shed programs.<sup>24</sup> However, it did not achieve those for cereal productivity and production of cash crops, such as the one for coffee by 2014/15. This is also true for the supply of key agricultural inputs such as improved seeds and chemical fertilizers, as well as the area of land developed under small-scale irrigation.

Table A4 in the Appendix tracks the performance of additional targets on economic growth and sectoral targets related to infrastructure and health. As noted above, the country also witnessed marked progress on the coverage and accessibility of road infrastructure (the total length of roads as a share of total road network and the average time it takes to reach all-weather roads), surpassing the GTP I targets. However, the performance on road density and proportion of roads in acceptable condition indicators points out that additional investment is needed to keep up with the growing demand for infrastructure due to population growth and the need to invest in the quality and maintenance of road infrastructure. Coverage rates of electricity and telecommunications (mobile and fixed lines) also fell short of the targets, with higher degree of success on the latter.

Performance in the health sector is also mixed. While Ethiopia attained the target of reducing under-five mortality rates from 101 to 68 deaths per 1,000 live births, targets set for infant and maternal

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<sup>24</sup> Graduation from the PNSP safety net program, however, has proven challenging (GTP II, page 8).

mortality rates, births attended by skilled health professionals, and rates of stunting and wasting were not fully attained by the end of GTP I period.

**Table 5. GTP targets for agriculture and rural development**

| Description of targets   | Unit of measurement  | Baseline 2009/10 | Plan targets 2014/15 | Actual 2014/15 | Five-year growth performance | Plan targets 2019/20 |
|--|----------------------|------------------|----------------------|----------------|------------------------------|----------------------|
| <b>Economic development</b>  |                      |                  |                      |                |                              |                      |
| Agriculture and allied activities growth                             | Percent              | 7.6              | 8.7                  | 9.60           | 26.3%                        | 8                    |
| <b>Crop production and productivity</b>                              |                      |                  |                      |                |                              |                      |
| Cereals productivity   | Quintals per hectare | 17               | 22                   | 19.5           | 14.7%                        | 30.9                 |
| Coffee production  | Thousands of tons    | 341              | 831                  | 548.2          | 60.8%                        | 1,102.6              |
| <b>Agricultural input supply and utilization</b>                     |                      |                  |                      |                |                              |                      |
| Supply of improved seeds   | Millions of quintals | 0.56             | 3.6                  | 1.87           | 233.9%                       | 3.56                 |
| Supply of chemical fertilizers (both DAP and Urea)                   | Millions of tons     | 0.83             | 1.66                 | 1.2            | 44.6%                        | 2.06                 |
| <b>Natural resource conservation and utilization</b>                 |                      |                  |                      |                |                              |                      |
| Area of land rehabilitated   | Millions of hectares | 3.21             | 10.21                | 11.7           | 264.5%                       | 22.5                 |
| Land developed under community based water shade development program | Millions of hectares | 3.77             | 7.78                 | 12.16          | 222.5%                       | 41.35                |
| Land developed under small scale irrigation                          | Millions of hectares | 0.853            | 1.85                 | 1.3            | 52.4%                        | 1.7                  |
| <b>Food security, disaster prevention, and preparedness</b>          |                      |                  |                      |                |                              |                      |
| Food reserve   | Millions of tons     | 0.41             | 3                    | 0.405          | -1.2%                        | 3                    |

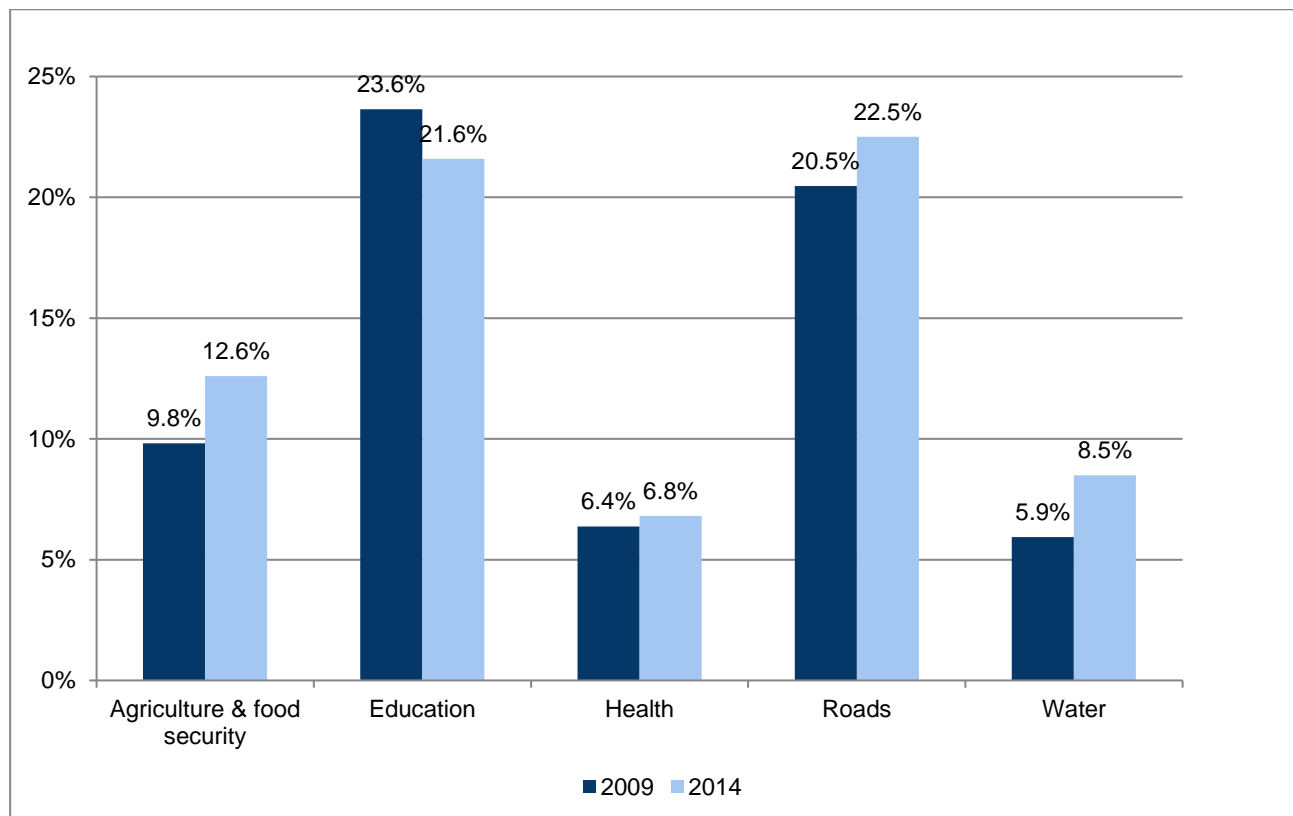
Source: Own calculations based on GTP I and GTP II documents.

### 3.4 Resource allocation on FNS

In addition to the above-mentioned sectoral targets, budgetary allocation of government expenditure provides insight into the priority given to agriculture and rural development in general, and food and

nutrition security in particular in Ethiopia. The financing strategy of GTP I presented in Figure 8 reveals the government’s plan to increase spending to poverty-oriented sectors over the GTP I implementation period (2009-2014), indicating continued priority given to FNS, conditional on successful resource mobilization.

**Figure 8. Planned government financing of development targets (GTP I)**



Source: Own calculations based on allocation of the total expenditure for financing sectoral targets of GTP I (GTP I, page, 41).

While commitment and priority to FNS do not seem to lag on the part of national policymakers, a lot can be improved in regard to the government’s resource mobilization strategy. Though tax revenue as a share of GDP increased and reached 13 percent of GDP by 2014/15, it is below the GTP target of 15 percent and the sub-Saharan African average (Table 6). The success of external resource mobilization through export promotion underperformed too due to a drop in international commodity prices of Ethiopia’s major export items (such as coffee and gold) and limited volume and diversification of exported products, according to the GTP I document.

For GTP II, implementation strategies similar to the ones in GTP I are adopted for the period 2015/16-2019/20, with ambition of the targets adjusted according to the above mentioned internal and external challenges the country experienced during GTP I (Table 5). To this end, GTP II aims to improve tax revenue mobilization as well as utilize the opportunities in the international market (such as the renewal of African Growth and Opportunity Act (AGOA) and the EU's "everything-but-arms" initiative) to increase the share of exports in GDP to 20.6 percent by 2019/20 (Table 6).

**Table 6. Resource mobilization**

| Indicator                          | Unit of measurement | Baseline 2009/10 | Plan target 2014/15 | Actual 2014/15 | Five-year growth performance | Plan targets 2019/20 |
|------------------------------------|---------------------|------------------|---------------------|----------------|------------------------------|----------------------|
| <b>The macroeconomy</b>            |                     |                  |                     |                |                              |                      |
| Real GDP growth rate               | Percent             | 10.4             | 11.4                | 11.4           | 9.6%                         | 10                   |
| Gross domestic saving              | Percent of GDP      | 5.5              | 15                  | 19.5           | 254.5%                       | 29.6                 |
| <b>Government finance</b>          |                     |                  |                     |                |                              |                      |
| Domestic revenue                   | Percent of GDP      | 14               | 17.1                | 14.4           | 2.9%                         | 18.8                 |
| Tax revenue                        | Percent of GDP      | 11.3             | 15                  | 12.9           | 14.2%                        | 17.2                 |
| Total poverty-oriented expenditure | Percent of GDP      | 12.3             | 17.3                | 11.7           | -4.9%                        | 14.6                 |
| Total expenditure                  | Percent of GDP      | 18.6             | 23.7                | 18.7           | 0.5%                         | 22.6                 |
| <b>External sector</b>             |                     |                  |                     |                |                              |                      |
| Total exports                      | Percent of GDP      | 13.6             | 22.5                | 12.8           | -5.9%                        | 20.6                 |

Source: Own calculations based on GTP I and GTP II documents.

The GTP II objectives related to agricultural development and rural transformation are much like those in GTP I<sup>25</sup> and align specifically with several targets from SDGs 1, 2, 3, 6, 8, 10, 12, 13, 15, and 17.<sup>26</sup> The GTP II also aligns with Malabo Declaration targets related to achieving agricultural GDP growth of 6 percent or more, doubling agricultural productivity, increasing access to inputs and extension services, mainstreaming resilience and risk management practices, and implementing effective water management systems.

<sup>25</sup> As before, the four key pillars related to food and nutrition security in GTP II are increasing agricultural income, production, and productivity; decreasing child malnutrition and mortality; building a climate resilient economy; and implementing a disaster mitigation and management strategy to reduce vulnerability to shocks.

<sup>26</sup> See the National Planning Commission's GTP II Policy Matrix document for a more extensive mapping of the GTP II objectives and targets against the SDGs: [http://dagethiopia.org/new/docstation/com\\_content/article/100/gtp\\_ii\\_policy\\_matrix\\_english\\_final\\_august\\_2016.pdf](http://dagethiopia.org/new/docstation/com_content/article/100/gtp_ii_policy_matrix_english_final_august_2016.pdf).

In summary, while there clearly are strategies in place to address FNS needs in Ethiopia, (and they align with those set forth by regional and international political bodies), there is a mismatch between commitment and performance. Resource gaps, misallocation of resources, and low adoption rates of nutrition guidelines and agricultural best practices can potentially explain the disconnect between strong policy commitments and weak performance. The next chapter discusses implemented programs and their progress and implementation challenges.

## 4 Programs and institutional innovations in Ethiopia's quest for FNS

### 4.1 The Agricultural Growth Program

Agricultural growth is fundamental to the development of Ethiopia. It accounts for 47 percent of the country's GDP, around 90 percent of its exports, and employs around 85 percent of the population (NBE, 2010). However, for many years the sector has been characterized by small-holder subsistence farmers tilling fragmented and highly degraded land with extremely low productivity. Transforming the economy has to start with the agricultural sector. Cognizant of this fact, the Ethiopian government has accorded high priority to the sector in its various policy papers and sector strategies. However, until recently, the focus for many years has been on rehabilitating and supporting food insecure areas with low productivity. This focus on chronically food insecure areas is based on the premise of providing assistance where the need is highest. However, focusing on food insecure areas has resulted in neglect to areas with higher potential. The agriculturally more productive areas, if supported with the right programs, can produce more and help improve the food security status of less endowed areas.<sup>27</sup>

The Agricultural Growth Program (AGP), initiated in 2010 and implemented in two phases by the government of Ethiopia with the support of USAID and the World Bank, is a major departure from previous projects in that it targets high potential areas based on suitability for agricultural activities.<sup>28</sup> The AGP is comprehensive in that it addresses aspects of the agricultural sector ranging from improving productivity; streamlining the marketing of agricultural products; promoting agricultural value addition through agro-processing; improving commercialization of the sector; and strengthening rural-urban linkages by addressing bottlenecks in the entire value chain. While the Ministry of Agriculture and Natural Resources<sup>29</sup> and its regional affiliates are the major governmental stakeholders, other project and time-bound institutes like the Agricultural Transformation Agency (ATA) and the Capacity Building for Scaling up of Evidence-based

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<sup>27</sup> According to a baseline report, households in the AGP woredas recorded shorter duration of food-insecurity seasons, higher dietary diversity score, and lower proportion of stunted children than households in the non-AGP woredas. However, the proportion of underweight and wasted children is higher for AGP woredas (ESSP, 2011).

<sup>28</sup> These are areas with potentially irrigable land, easy access to infrastructure, and initial institutional capacity to undertake the program.

<sup>29</sup> The current Ministry of Agriculture and Natural Resources (MoANR), before its most recent institutional restructuring, previously had different names such as Ministry of Agriculture (MoA), and Ministry of Agriculture and Rural Development (MoARD).

Practices in Agricultural Production in Ethiopia (CASCAPE), are involved in the implementation of the project.

Initial project estimates of AGP I indicate that the project costed around \$265 million and was funded by the government and international donors including the World Bank, UNDP, CIDA, USAID and others. Looking at the backing of the government and its international development partners, AGP is considered as a multi-faceted investment mechanism of the government and its development partners.

The AGP has two major components and a number of sub-components. The first component, *agriculture production and commercialization*, strengthens supportive institutions, scales up best practices, and promotes marketing and agri-business development. The second component is *small-scale rural infrastructure development and water management*. The first phase of the AGP, launched in 2010, started in the selected woredas of four regions of the country (Oromia, Amhara, Tigray, and Southern Nations Nationalities Peoples Regional State (SNNPR)) and was rolled out on a gradual basis. The program is aligned with the Comprehensive Africa Agriculture Development Program (CAADP) targets and national development strategies, including Agriculture Development Led Industrialization (ADLI), Plan for Accelerated and Sustained Development to End Poverty (PASDEP) and Rural Development Programs (RDPs). According to the Ministry of Agriculture and Rural Development, the AGP was designed to address systemic bottlenecks to agricultural growth and meaningfully contribute to sustained rural development (MoAD, 2010).

Under the umbrella of the AGP, there is a side project called Agricultural Growth Program-Agri Business and Market Development (AGP-AMDe) (2011-2016). This project works on income-generating activities by increasing the productivity and effectiveness of value chains of select agricultural products such as chickpeas, coffee, honey, maize, sesame, and wheat in the AGP woredas of in Oromia, Amhara, Tigray, and SNNPR. The six commodities were selected for the dual reason of improving food security and increasing incomes of smallholder farmers. By the end of the five-year period, AGP-AMDe aspires to double the gross margins and significantly reduce post-harvest losses to more than 1 million small-holder beneficiary farmers.

Implementation and data collection challenges have hindered rigorous impact evaluations of the AGP I. For example, the program was not implemented in some of the woredas when the mid-

term data was collected.<sup>30</sup> In addition, some of the interventions, like investments in irrigation, need time to have a discernible impact (ESSP, 2013).<sup>31</sup> According to the then ministry of agriculture<sup>32</sup> (MoA, 2015), poor coordination among program implementation agencies, skills-related capacity gaps, and poor planning at the lower administrative levels were also major obstacles.

AGP II, which was launched in 157 woredas, including 95 from AGP I, has now expanded to encompass seven regional states and one city administration.<sup>33</sup> On top of increasing agricultural productivity and commercialization, which were the focus areas of AGP I, phase two tackles challenges of dietary diversity and focuses on improving consumption patterns of households. Cross-cutting issues like gender, nutrition, and climate-smart agriculture also form critical aspects of AGP II.

AGP II is estimated to cost around \$581.8 million of which around \$350 million is covered by loans and grants from international development assistance (IDA), while the remaining balance is covered by co-finances from international development partners including Canada's Department of Foreign Affairs, Trade and Development (DFATD), USAID, the Netherlands, the European Commission (EC), Spanish Agency for International Development (AECID), and Italy's International Development Cooperation.

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<sup>30</sup> Furthermore, BDS a consultancy firm involved in the collection of baseline data of the AGP identified serious flaws encountered in the baseline survey. Firstly, many of the outcome variables used in the survey were not designed properly. The outcomes were not measurable, achievable, and relevant and time bound. Secondly, the indicators were not properly designed; they lack clarity, were not specific enough and at time were even difficult to measure.

<sup>31</sup> The mid-term survey conducted in 2012 on 93 woredas of which 63 are AGP woredas have mixed findings. Accordingly although average yield and revenue is relatively higher in the AGP woredas, after controlling for household and village level heterogeneities, the mid line survey report (2013) did not finding significantly different yield index and total revenue in AGP woredas.

<sup>32</sup> The current Ministry of Agriculture and Natural Resources (MoANR), before its most recent institutional restructuring, previously had different names such as Ministry of Agriculture (MoA), and Ministry of Agriculture and Rural Development (MoARD).

<sup>33</sup> The initial AGP II implementation period was from 30-Sep-2014 to 30-June-2020, however, the start and end date of AGP II is revised from April 2017 to 2021, respectively to allow more time the AGP I impact evaluation of AG I to be completed and due to other implementation challenges, according to informal correspondence with MoANR.



### **Box 1. Interview insights on the agriculture sector in Ethiopia: Challenges and ways forward**

One critical aspect of agriculture repeatedly raised during the interview sessions held for the purpose of this study is that agriculture is not considered a business in Ethiopia. The overriding ideology concerning agriculture is that it is not a venture where profit-maximizing entrepreneurs engage, according to respondents. This condition is evidenced by, for instance, lack of access to credit to farmers: Respondents contended that banks do not consider farmers viable clients. Further, farmers do not have easy and direct access to the market and other inputs.

Of course, the respondents acknowledged that agriculture is a risky business that depends on the vagaries of weather and agro-ecological situations, making it difficult to attract private sector investment and insurance. However, they argued that if the right support (such as tax breaks and cheap loans) is provided, private investors would be interested to invest in the sector. One respondent discussed the need to support the entire value chain of the sector, which involves improving agricultural productivity, streamlining the logistics sector, improving rural infrastructure and supporting the development of agro-processing industries. Regional organizations like the African Development Bank are assisting in commercializing agriculture by investing in interventions that improve the competitiveness of the sector. Governmental project office interviewees also indicated that there are programs that are designed to commercialize Ethiopia's subsistence farming against the backdrop of the usual perception against agriculture as a business venture. For instance, the Agriculture Commercial Cluster (ACC) is an initiative of the Agricultural Transformation Agency (ATA) that primarily works on commercializing agriculture and mainstreaming agriculture as a business.

The interviewees further argued for the need to attract foreign direct investment (FDI) in the agriculture sector. Based on the experience of other African countries, a respondent said that promoting Ethiopia's suitable agro-ecological conditions and fast-improving business environment might better attract FDI into the country. Nevertheless, another respondent argued that private investment in agriculture has failed to bear fruit. Investors engaged in agriculture (both locally and through FDI) were provided cheap credit and easily irrigable land with cheap lease prices; however, the investors diverted the loans to other investment ventures, and the majority of investments have stopped operations.

Modernizing the agricultural sector was another important challenge raised by the respondents, such as adopting modern irrigation systems. Development partners like IFAD are already assisting in small-scale irrigation projects that improve agriculture productivity and are financially feasible. Moreover, ATA has an active irrigation system project to help small-holder farmers reduce their heavy dependence on rain fed agriculture.

In Ethiopia, more emphasis is given to increasing production of the agriculture sector than improving the productivity of individual farmers, it seems. The respondents claimed that small-holder farmers' productivity is very low and the focus for most part have been on increasing overall production of the sector by bringing more area of land under cultivation. The same is true with regards to livestock. The respondents claimed that to talk about agriculture in Ethiopia is to discuss issues

related to crop production. The livestock sub-sector is neglected although it is the prime means of livelihood for significant part of the population and source of foreign currency for the country. Pastoralists, due to the nature of their lifestyle are exposed to higher environmental risk and get minimum support from the government and development partners. In 2013, the government of Ethiopia established Livestock State Ministry that is solely responsible for overseeing the livestock sector and addressing the various challenges facing pastoralist communities.

The marketing of agricultural products has been one of the critical bottlenecks to the development of the sector in Ethiopia too. Even at times when farmers produce surpluses, they fail to commercially benefit because of a lack of well-functioning agriculture markets. The respondents had varying opinions, especially in regard to the intermediaries who serve as middlemen between farmers and consumers. One group of respondents considered middlemen entrepreneurs who facilitate agricultural trade. To other group of respondents, middlemen are often seen as brokers who take advantage of producers, especially in the marketing of perishable agricultural products like fruits and vegetables. However, both groups of respondents agreed on the need to improve the marketing of agricultural products in the country.

### **Innovation schemes in agriculture**

Interview results held with major project offices involved in transforming the agricultural sector in the country indicated that innovative large-scale programs are being undertaken to address the systemic bottlenecks of the agricultural sector, and to improve the capacity of implementing institutions. The ATA is one such time-bounded institute working to identify and address systematic bottlenecks to the growth of the agricultural sector and to provide implementation support to relevant bureaus. The respondents at the ATA indicated two flagship programs that have helped modernize the agricultural sector in Ethiopia. First, the ETHIO-SIS project, a digital soil mapping initiative of the ATA, studies the fertilizer needs of different soil types across the country and recommends types of fertilizer for improving their nutrient content—and thus their—productivity. Second, to tackle the credit constraints facing farmers in Ethiopia, the ATA introduced the Input Voucher System, which provides credit at the right time, improves the saving of farmers, and significantly reduces stress sales since farmers can now sell when the prices are right.

## **4.2 The National Nutrition Program**

While a number of national and sector-specific policies and strategies touched upon nutrition security, it was only in 2008 that the government of Ethiopia drafted the first National Nutrition Program (NNP) in an attempt to bring a focused, strategic, and multi-sectoral approach to address the perennial problem of malnutrition in a coordinated manner.<sup>34</sup> The move brought together

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<sup>34</sup> While the National Nutrition Strategy, also launched in 2008, highlighted the roadmap and identifies priorities, the program discusses the detailed action plans, timeline and costing of the national nutrition strategy.

isolated programs and interventions scattered across various sectors and undertaken by national and non-governmental stakeholders and facilitated pooling (national and external) resources targeted at achieving nutrition security.

The first national nutrition program, which was implemented over 2008-2013, had the general objective of attaining adequate nutrition status in a sustainable and cost-effective way, giving special attention to the nutritional status of children under the age of five and pregnant and lactating women. Moreover, the program aimed at protecting society from unhealthy dietary patterns and lifestyles. The program has four strategic objectives and a number of specific objectives. The four strategic objectives are:

1. Improving the nutritional status of women (15-49 years), and adolescents (10-19 years).
2. Improving the nutritional status of infants and children under the age of five.
3. Improving delivery of nutrition services for patients of all age groups with both communicable and non-communicable diseases.
4. Improving the implementation of nutrition-sensitive interventions across sectors (such as agriculture, education, and water).

By the end of 2013, the program targeted to bring down the high incidence of underweight, stunting and wasting in the country. Accordingly, it was planned to reduce underweight from 38 to 30 percent, stunting from 46 to 40 percent and under-five wasting from 11 to 5 percent. Nevertheless, the targets were hardly achieved in the stated period.

Based on 2013 a government assessment, the first NNP faced a number of challenges, including an initial lack of inter-sectoral coordination among participating sectors. The organizational structure to implement NNP at the federal level was inadequately present or totally absent to facilitate implementation at the regional and/or woreda levels. Second, the programs and strategies of the other participating sectors did not adequately address the issue of nutrition. Third, the program performed poorly in mainstreaming gender-sensitive policies and building the human capacity of people involved in implementing the nutrition program. The program was also not successful in generating data from all relevant programs, making the exchange of experience and learning from various programs extremely difficult. Finally, the program failed to include lifecycle approach, like the first 1,000 days in the life of the child that would have tackled the intergenerational cycle of malnutrition.

In 2013, the government revised the National Nutrition Program to address the shortcomings of the previous program. Towards this end, the second nutrition program (2013-2015 period)

incorporated a structure that clearly defined the roles and responsibilities of each sector with an accountability matrix and costing for all planned activities.<sup>35</sup> At the federal level, the national coordination body chaired by the federal Ministry of Health and co-chaired by state ministers of Ministry of Agriculture and Natural Resources and Ministry of Education are responsible for leadership, policy decisions, and coordination of the national nutrition program. Around 10 relevant ministries, members of the donor community, private sector, and academia are members of the national coordination body. The coordination body is decentralized and extends to the regional states, woreda, and kebeles following the federal arrangement of the country.

The second national nutrition program was also aligned with the Millennium Development Goals and other national sectoral programs. The main targets stipulated by the program were bringing down the prevalence of under-five stunting, wasting, and under-nutrition in women of reproductive age to 30, 3, and 19 percent respectively by the end of 2015. In addition to the strategic objectives of the first NNP, the revised NNP has a fifth objective of improving multi-sectoral coordination and institutional strengthening to ensure implementation of the programs and nutrition service delivery. Furthermore, unlike the first national nutrition program, the revised program follows the life-cycle approach with emphasis given to the first 1,000 days of life from the mother's pregnancy through the child's second birthday. Each required activity over the program period is budgeted and costed. Accordingly, the program is estimated to cost \$547 million for the three-year period where almost half of the budget goes to activities done in 2014, while a third of the budget is to be used in the last year.<sup>36</sup>

Both government and the donor community play crucial roles in implementing the program. The Ministry of Health is the lead government agency that is responsible for overseeing nutrition projects in the country. The Ministry of Agriculture and Rural Development is streamlining nutrition through the nutrition-sensitive agricultural strategy. The Ministry of Education, on the other hand, manages the national school health and nutrition strategy in which school feeding is key component. The Ministry of Water is running safe water and sanitation projects like WASH (Water Supply Sanitation and Hygiene). Non-governmental organizations play critical role too. Some of the bilateral and multilateral actors that are active in implementation of the NNP are UNICEF, USAID, DFID, WHO, WFP, World Bank, COOPI, CIDA, and Irish Aid.

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<sup>35</sup> The accountability and results matrix outlines the core results and their indicators as well as the sectors accountable and the evaluation period for these indicators. The matrix hence serves as a monitoring and evaluation framework for all nutrition programs and projects in Ethiopia.

<sup>36</sup> Of the total budget, 88.5 percent will be applied to improving the nutritional status of mothers, infants, young children, and children under the age of five.

Currently, the government of Ethiopia is also in the process of drafting a new national nutrition policy, building on the national nutrition strategy and programs implemented since 2008 to address policy gaps and implementation challenges including coordination among line ministries. According to [Relief Web](#), the policy will be effective at the end of 2017.

#### 4.2.1 “Sekota” declaration: The epitome of commitment to nutrition security

The drought of 1984 was devastating, resulting in hundreds of thousands of deaths due to a famine that ensued. The name Ethiopia became entwined with drought and famine after pop stars convened to help the victims and raise funds through the live-aid concerts. Although a good part of the northern provinces of the former Wello and Tigray administrative regions were affected by the famine, the small town of Sekota stood out as the worst hit.

Three decades later, Ethiopia still suffers from high incidence of poverty and malnutrition, along with recurrent drought, including one in 2016. Those same places continue to experience high incidences of stunting, reaching around 80 percent in some pockets of villages (USAID, 2014). The government of Ethiopia, realizing this perennial problem, came up with a very comprehensive policy document named after Sekota.

The [Sekota declaration](#) showcases the strong commitment of the government to end malnutrition by 2030. The declaration was launched alongside the Third International Conference on Financing for Development held in Addis Ababa in July 2015. Since then, the Sekota declaration has attracted international attention, and many bilateral and multilateral stakeholders pledged to support the government to achieve its set goals.<sup>37</sup> On the part of the Ethiopian government, the Sekota declaration is a multi-sectoral commitment that brought nine ministries as signatories of the declaration.<sup>38</sup> Recognizing that ending child malnutrition requires coordinated efforts from all stakeholders, the implementation plan of the declaration emphasizes improving adolescent, infant, and maternal nutrition, increasing access to water and hygienic services, building resilient social protection systems, and supporting the economic empowerment of women, and improving access to education especially girl’s education. The declaration gives impetus to the national strategies designed to tackle the problem of food and nutrition insecurity (FDRE, 2016).

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<sup>37</sup> USAID, GATES, WB, and the EU are some of the major supporters/partners of the Sekota program/initiative.

<sup>38</sup> Some of the signatory ministries include the Ministry of Agriculture and Natural Resources (MoANR.), Ministry of Health ( MoH), Ministry of Trade (MoT), Ministry of Industry (Mol), Ministry of Education (MoE), Ministry of Finance and Economic Cooperation (MoFEC), and Ministry of Women and Children’s Affairs (MoWCA).

The declaration is to be implemented in three phases. The first phase, which runs from 2016 to 2018, is the innovation phase where the piloting of innovative programs is run along the Tekeze river basin in Amhara and Tigray regional states. At this stage, the plan is to establish a community lab and learning-by-doing centers that can later be scaled up. The plan envisions to expand to vulnerable communities in the second phase of the program (between 2019 and 2020). Finally, the plan will roll out nationally in the third phase over 2020-2030.

## **Box 2. Challenges in achieving nutrition security in Ethiopia: Insights from key interviews**

Findings from the key informant interviews held for the purpose of this study indicate that the challenges in achieving *nutrition* security are complex in their nature and need more attention than those of food security. The challenges identified through the interviews fall into three major categories: lack of coordination between implementing agencies, knowledge or information gaps, and lack of capacity (both financial and human resources).

### **1. Lack of intersectoral coordination**

Coordination among implementing agencies is crucial for a multi-sectoral issues like that of nutrition. Respondents agreed that, in Ethiopia, intersectoral coordination among the various bodies involved in the nutrition security is poor and, at times, non-existent. An interviewee with long hands-on experience in the sector explained that the National Nutrition Program has 14 signatory ministries and the planning is very comprehensive with clear indicators, but none of these agencies “own” the document. The Ministry of Health has the role of coordinating other sectors but has limited mandates to execute the program. Some of the signatories of NNP do not even understand what role they play in the implementation of the program. Even those ministries taking part in the implementation process have not yet included the issue of nutrition security as one of their core businesses.

The coordination failure is also manifested at the regional and lower administrative levels. While the federal government has set up a structure to bring all pertinent line ministries together, the structure is fragmented and varies from one region to the other. Another interviewee said that even when there are attempts to coordinate there are no concrete mechanisms in place to jointly implement the action plans. Every sector ministry is running to address their own missions instead of getting involved in projects that need their concerted efforts.

Another discussant acknowledged the government’s commitment to nutrition security epitomized by the Sekota declaration. However, there are little efforts made to integrate the Sekota declaration with projects on the ground. The declaration was a campaign launched with high fanfare but lost its momentum when going to actual implementation.

## **2. Poor implementation capacity**

Lack of adequate resources has hampered the implementation of different programs designed to reduce nutrition insecurity in Ethiopia. Interviewees argued that the government prioritizes production-based agriculture and allocates limited resources to projects geared towards achieving nutrition security. Rather, many projects on nutrition security are donor funded. Moreover, the local human capacity for implementing the projects is very poor. There are few highly trained experts in the field of nutrition in the country, making the projects highly dependent on foreign experts. There is also high labor turnover in the relevant government agencies mainly because of poor compensations and benefit packages.

## **3. Incomplete information and knowledge about nutrition**

Nutrition security is intergenerational and highly correlated with the development of society. Lack of information and knowledge about nutrition goes a long way in explaining the poor status of nutrition in Ethiopia. Poor eating habits, lack of knowledge about hygiene, and cultural practices that do not encourage better nutrition are rife. Thus, discussants argued that achieving food security and having surplus production does not necessarily translate into nutrition security. Households need to be educated and sensitized to diversifying their diets. An interviewee argued that farmers in Ethiopia would rather sell nutritious animal products than feed those products to their kids. Already, simple WASH practices help in getting better health results, which ultimately reduce nutrition insecurity.

### **Innovative programs and initiatives**

Although the interviewees indicated that there are a number of challenges, they also highlighted some innovative initiatives and programs geared towards achieving nutrition security in the country. According to the respondents, the health extension program, which serves as the vehicle through which nutrition programs are implemented, is one of the key institutional innovations in the fight against nutrition insecurity. The community-based nutrition program was particularly identified as a successful case. In it, health extension workers demonstrated preparation of balanced diet to rural communities and further taught improved child feeding methods. Another exemplary innovative scheme is a program that introduces locally produced food that replace corn soy blends—one of the fortified blended foods commonly used by USAID and implementing partners like the World Food Program. The new nutritious substitute is a mixture of cereals and pulses that is sourced locally and verified to contain the necessary ingredients by the Ethiopian Public Health Research Institute.

## **4.3 Resilience**

### **4.3.1 The Ethiopian Productive Safety Net program**

Ethiopia has suffered from food insecurity due to perennial large-scale, drought-induced famine. The response by the government and the international community has, for many years, been to

inject emergency food aid as immediate response. However, if the country is going to truly reduce the number of food insecure people, a coordinated, large-scale intervention is necessary. The productive safety net program (PSNP), launched in 2005, is a major intervention by the Ethiopian government and its development partners to reduce household vulnerability, improve resilience to shocks, and promote sustainable community development in food insecure areas of rural Ethiopia.<sup>39</sup>

The PSNP in Ethiopia is one of the largest social protection programs in Africa. The latest round of PSNP provides support to around 8 million people. For the five years between 2009 and 2014, the project cost around \$2.1 billion. The program began with around 190 chronically food insecure woredas in the four regional states of Ethiopia: Tigray, Amhara, Oromia, and SNNRP. A mix of geographic and community targeting was used to select beneficiary woredas and households. Use of historic food aid allocation data was used in determining the number of beneficiaries to be supported in each PSNP woreda.

The PSNP has two major components. The public works component targets households with able-bodied members to participate in productive work such as construction of infrastructure projects like rural roads, small-scale irrigation, and environmental conservation activities such as reforestation or farm land terracing in exchange for cash or in-kind payments. This is a form of employment in the lean seasons of the year (January to June). The direct support component provides unconditional cash transfers to households who could not participate in the public works due to old age, sickness, or supporting disabled household members. By participating in different community projects in exchange for cash, households prone to food insecurity are expected to be able to smooth out their consumption patterns.

Another critical goal of the program is protecting households from the distress sale of their productive assets (such as livestock and seeds) in times of food shortages, which only exacerbates the situation of poor households. Finally, the program creates community assets, such as irrigation, watersheds, soil, and water conservation activities on communal lands, which in turn improve land productivity and ultimately bring about sustainable development.

The PSNP was complemented by Other Food Security Programs (OFSP) to generate additional income and assets for the participating households by improving participants' access to credit and

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<sup>39</sup> According to project documents, a number of donors are involved in funding PSNP including the World Bank (major financier), DFID, Irish Aid, European Commission, CIDA, the government of the Netherlands, Danish International Development Agency, USAID, and the WFP.



productive inputs (such as livestock, bees, agricultural tools, and pastureland), as well as the adoption of small-scale irrigation and water-harvesting schemes. However, the OFSP failed to bring changes mainly due to implementation problems (World Bank, 2011), such as lack of resources, skills gaps of agents providing OFSP services, absence of clear guidelines for targeting beneficiaries, and lack of coordination between the government and implementing NGOs (Berhane et al., 2013).

In 2009, the government, with the assistance of international partners, introduced the Household Asset Building Program (HABP) to replace the OFSP. HABP provides multifaceted activities to support agricultural production, food security, and household asset accumulation. The primary objective of HABP is income diversification through the facilitation of access to credit and assistance to households in preparing business plans. Compared to the OFSP, HABP is better aligned with extension services, woreda-level micro and small enterprise bureaus, off farm technical officers, and programs for women and youth. HABP is also more focused and better staffed as it assigns three development agents (DA), each specializing in crop, animal, and agricultural technologies, to each beneficiary kebele. Unlike the OFSP, credit services are separate from extension services and channeled to beneficiaries through local micro finance institutions, and rural saving and credit cooperatives. Finally, there was better targeting of beneficiaries of HABP. A combination of the PSNP and HABP will ultimately result in graduating from the program that is defined as “the ability to fulfill food needs for the entire 12 months of the year and have the resilience to small shocks in the absence of transfers from PSNP.”

Evaluations of the PSNP/HABP have generally shown positive impacts on the livelihoods of households (Gilligan et al., 2009, Berhane et al., 2011; 2014). For instance, Berhane et al (2014), using the 2006, 2008, and 2010 rounds of PSNP survey data, find that the participants in the public works component of the PSNP program significantly improved their food security status (defined as having no problem to satisfy the food needs of households) and livestock asset ownership. Furthermore, households who participated in both PSNP and HABP witnessed larger impacts.<sup>40</sup>

However, there was no evidence of improvements in nutrition indicators in the participating woredas. Berhane (2014), using 2008-2012 PSNP survey data, found no evidence of the PSNP reducing the incidence of child stunting and wasting. Poor water and hygiene practices, failure to

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<sup>40</sup> Notably, combining PSNP with HABP resulted in increase of food security by 1.5 months and household assets by 0.99 Tropical Livestock Unit (TLU), compared to an increase of food security duration by 1.29 months and a livestock asset ownership by 0.38 TLU for those who participated in the public works only.

consume balanced diets, and lack of information on good feeding practices were reasons blamed for the lack of impact (Berhane, 2014).

Repeated droughts continue to put pressure on the efforts made towards food security. In fact, in recent years, the cycle of drought has become shorter. What used to be once-a-in-a-decade scenario is now happening every two to three years, challenging both the adequacy of resources to and graduation rates from PSNP.<sup>41</sup> Hence, it is paramount to strengthen food security programs. Towards this end, the PSNP-IV (2014-2019) is going to be implemented in coordination with the health extension program, which is an internationally acclaimed success story (Workie and Ramana, 2013).

### **Box 3: Interview insights on the Productivity Safety Net Program: Challenges and success stories**

The Productive Safety Net Program (PSNP) is one of the major interventions to curb the problem of food security in Ethiopia. Indeed, many of the interviewees approached for this research were keen to discuss the PSNP. Respondents acknowledged that the PSNP plays a critical role in improving the food security status of the country and building resilience to shocks. Respondents indicated that the PSNP is an integral component of the strategic documents like the GTP and national agricultural and rural development papers. Moreover, the respondents argued the fact that there is a directorate within the Ministry of Agriculture and Natural resources that is exclusively responsible for implementation of the PSNP indicates government's level of commitment to the program. On top of generous international assistance from bilateral and multilateral donors, the government allocates significant resources to the PSNP indicating the government's level of commitment to the program.

Respondents further indicated that the program covers large parts of the country. Currently 349 woredas and more than 8 million beneficiaries take part in the program. If it were not for the shortage of resources, the program could have increased beneficiaries to close to 10 million people, many said. The interviewees further indicated that the government has a plan to merge emergency relief with the PSNP and is currently working on producing a document with the assistance of pertinent national and international stakeholders.

One of the unique features of the PSNP program, as reported by the respondents, is the continuous and strict monitoring and evaluation system in place since its launch. First, a large-scale survey of the program is conducted and evaluation reports are produced by reputable researchers. Second, a joint rapid response mission of selected sample woredas is conducted three times a year involving representatives from the government and donors. Third, a joint review and implementation mission is

<sup>41</sup> According to the respondents from MoA/PSNP directorate, between 2000-2006 Ethiopian Calendar, 3.5 million people graduated from the program but because of repeated drought, there has been no graduation after 2006. People who graduated may have also returned to PSNP due to the drought; hence, there are 8 million beneficiaries in PSNP IV.

conducted twice a year. Finally, there is a strict financial audit system that accounts every resource spent on the project.

The respondents also discussed the following innovative schemes unique to the PSNP in Ethiopia.

1. **PSNP-donor coalition team:** The lion's share of the PSNP program is funded by donors. There is a joint donor coalition team for the food security sector/PSNP. The team has delegates from the 10 members (World Bank, USAID, and UNICEF are the major contributors) and it is hosted by the World Bank's Ethiopia office. The team has an independent dissemination document and implementation manuals. It provides technical assistance through international experts, using rigorous evaluation and monitoring tools and research. The team oversees program implementation and requests standard reports from the government before releasing funding to the program. There is a strict financial management and controlling system, and accountability issues are included in the document. The rigorous procedures in place are one of the main reasons donors have financed the PSNP program continuously since its inception.
2. **The joint introduction of PSNP with its three major components (food security, resilience building, livelihood support).** Capacity development and awareness programs are first provided to the beneficiaries before providing them with credit and saving systems. The goal of all these components is to graduate chronically food insecure people and ascertain self-sufficiency.
3. **The introduction of the nutrition dimension as one component of PSNP IV.** This is done through the inclusion of nutritious foods in the existing food budget of the beneficiaries. To this end, gender and social development and nutrition training have been started for implementers and clients. In addition, the agricultural extension system has a food and nutrition case team to address FNS issues at the household level.
4. **The Climate Smart Initiative (CSI).** Now an additional component of PSNP, the CSI further integrates resilience-building programs with natural resource management programs, such as public works, water and soil conservation, and rehabilitation activities. The mandate is given to the woreda Natural Risk Management (NRM) focal person to oversee the initiative and to directly contribute to the climate mitigation processes.

Despite its many successes and innovations, the PSNP has faced challenges. Some of the challenges repeatedly mentioned by respondents included: shortage of resources, poor targeting of beneficiaries, low implementation capacity, failure to coordinate the PSNP with other donor-supported programs, poor use of the information management system, and failure to graduate beneficiaries from the program. (Due to repeated drought there was no program graduation in recent years and some that graduated were pegged back.)

#### **Box 4. Insights from interviews on disaster and reduction mitigation in Ethiopia: Challenges and success stories**

Ethiopia has faced large-scale drought and its citizens have suffered from the resulting famine and destitution. Although the country is still prone to drought-induced natural calamities, the degree to which drought turns into large-scale famine and death has significantly reduced in recent years. According to interviewees, the overhauling of the disaster risk management system of the country should be credited for this success. But what has actually changed and what lessons can we learn from the country's fight against disasters? What challenges does the country face in terms of mitigating them?

According to high-level officials with extensive experience in disaster mitigation in Ethiopia, the positive responses to disasters are brought in by an early warning system, successful disaster risk reduction (DRR) planning, innovative financing schemes, and streamlined organizational structures.

The country has a very extensive DRR planning scheme. The DRR plan is decentralized to the smallest administrative unit, the woreda level, and is synced with the regional and national disaster and risk reduction commissions. The main contents of the woreda plan are identifying underlying causes of drought risks at the woreda, analyzing its impact on food security status, and suggesting mitigating strategies. Each woreda plan has the list of specific risks in its area, such as livestock disease, problems related to water logging, and soil management. The planning process at the woreda level involves collection of drought and other risk-related data, analysis of the raw data, and validation of the results with officials from the respective woreda to finalize the DRR plan and draft area-specific mitigation strategies. Using the plan, the woreda prepares a risk profile that serves as the basis for any intervention in mitigating risks.

Innovative financing schemes have played a crucial role in changing the state of disaster reduction in Ethiopia. Interview respondents indicated that regions very prone to drought introduced a reserve fund that serves as an emergency source of financing for disaster risk before help arrives from the federal government and international donors. The regional government allocates a certain amount of money to the fund, which is supplemented by donations from the private sector, government employees, and other donors. The fund is kept at different administrative structures ranging from woredas to zones and regional administrations so that when an emergency surfaces the money will be released to the beneficiaries with minimum bureaucratic hurdles. Moreover, at times when there is no immediate need of emergency funding, 30 percent of the fund is used for development endeavors designed to build resilience of the local community.

The early warning system of the country has been revamped and designed to be more responsive to disasters. According to the respondents, the country's early warning system is more proactive. There are 15 disaster risk indicators compiled at the woreda level and reported to the regions on a weekly basis. The region intern produces a monthly early warning report. The national disaster and risk reduction commission finally compiles the data sent by the regions and produces a seasonal assessment. The seasonal assessment is a comprehensive report that is an integral part of the humanitarian requirement document produced in cooperation with international donors.

Finally, institutional restructuring has played an important role in the fight against disasters in Ethiopia. Today, the National Disaster Risk Management Commission (NDRMC) is an independent organization directly accountable to office of the prime minister. This change has brought empowerment and effective enforcement rather than the bureaucratic challenges of the past. The NDRMC has streamlined structures and procedures that have improved the national food security reserves and the strategic emergency relief fleet, which has significantly improved the transportation of aid to beneficiaries.

Despite these successes, the country's disaster management system is also faced with challenges. According to the respondents some of the challenges include:

- High level of staff turnover, both from the executive officials and the expert-level employees coupled with lack of highly skilled professionals trained in disaster and risk reduction.
- Lack of modern technologies that can assist in an information processing system-supported early warning system
- Limited resources because donors' attention has been shifted to the Middle East and other global crisis, including South Sudan.
- Increased number of emergency beneficiaries because of the recurrent drought. The frequency of the drought was between five to 10 years in the past, but now there is drought more often.
- Mainstreaming the DRR programs. There is low level of commitment from some ministries to plan, follow up, and monitor the disaster risk-related programs because they are busy with their routine responsibilities.
- Donor dependency. Convincing international community these days is not easy as they need a repeated appeal and come with their strings attached. "The international community gives priority to the international media since they trust video supported messages instead of accepting the government's formal appeal," said one respondent.
- Dependency syndrome on part of the beneficiaries. People are developing the habit of waiting for support from the government and donors.

#### 4.3.2 The Climate Resilient Green Growth strategy (CRGE)

Ethiopia is one of the countries worst hit by the impacts of climate change. Frequent drought and rainfall variabilities have affected the agricultural sector, which is the mainstay of close to 85 percent of its population. In an attempt to mitigate the impact of climate change and build a resilient green economy, the Ethiopian government drafted its first-ever Climate Resilient Green Economy (CRGE) strategic paper in 2011. The strategy forms an integral part of the second phase of the Growth and Transformation Program of the country (GTP II).

The CRGE strategy of Ethiopia has the ambitious goal of reaching a middle-income country status with zero net emissions by 2025. This goal requires maintaining the release of greenhouse gases to 150 Mt Carbon dioxide equivalent (CO<sub>2</sub>e), which would otherwise reach 400 Mt CO<sub>2</sub>e under

business-as-usual approach. In doing so, the CRGE follows a sectoral approach by overseeing and identifying close to 60 initiatives.

The strategy has four important pillars. The first pillar deals with the adoption of agricultural and land use efficiency measures that improve both crop and livestock production to achieve food security and increase the income of farmers. The second pillar states the need to increase the forest coverage that helps reduce the amount of greenhouse emissions released into the environment on top of the monetary gains garnered from afforestation. The third pillar expands environment-friendly power-generating schemes for domestic and export purposes. The final pillar introduces modern and energy-efficient technologies in critical sectors like transportation, industry, and construction.

In order to achieve the four pillars, the CRGE has selected fast-track initiatives, which broadly fall into four categories. First, to meet the growing need of clean energy, the strategy aims to exploit the huge hydroelectricity potentials of the country, which is estimated to be around 45,000 megawatts. Currently Ethiopia's generating capacity from all sources does not exceed 4,000 megawatts (Asnake, 2015). Second, the strategy promotes large-scale environmentally friendly cooking technologies especially in the rural parts of the country, which is considered a major intervention in realizing green growth. Third, the strategy attributes agriculture as the main source of greenhouse gas emissions in Ethiopia, with the livestock sector being responsible for close to 40 percent of emissions. (CRGE, 2011). Hence, improving the livestock value chain is considered as an important initiative in curbing the environment consequences of the sector by the CRGE strategy. Finally, the strategy aims to reduce emissions resulting from deforestation and forest degradation. In this regard, the Ministry of Environment, Forestry, and Climate Change has launched a major project named after the initiative, Reducing Emissions from Deforestation and Forest Degradation (REDD).

To implement the CRGE strategy successfully, the government of Ethiopia has undergone institutional restructuring. The former Environment Protection Authority has been elevated to the Ministry of Environment, Forestry, and Climate Change. The CRGE governance structure is led by a ministerial steering committee of the CRGE initiative under the office of the prime minister and is responsible for overseeing the implementation of the strategy. In order to translate the strategy to sectoral programs and investment plans, CRGE units have been established in key line ministries such as the Ministry of Environment, Forestry, and Climate Change, Ministry of Agriculture and Natural Resources, and regional state governments. Moreover, the government has established a CRGE facility, which is a funding mechanism to mobilize and disburse climate

finance under the Ministry of Finance and Economic Cooperation. The facility raises funds from national and international sources. Accordingly, the facility includes loan arrangements, co-financing, results-based payments, grants, etc. The CRGE is estimated to cost around \$200 billion over 20 years. The major international partners of the CRGE are UNDP, and the governments of the United Kingdom, Norway, and Austria.

According to interviewees, there was a weak link between CRGE and GTP I and in GTP II, the CRGE plan was appended into the GTP II policy document in haste without in-depth discussion. Consequently, the CRGE strategy is not well integrated with GTP II. Moreover, even GTP II does not have clearly set resilience indicators, though efforts are underway to develop these indicators to track performance and to provide the basis for any impact evaluations.

#### 4.3.3 Sustainable Land Management Program (SLMP)

Ethiopia's agriculture has been heavily dependent on rain-fed traditional farming practices, done over fragmented and rugged landscape devoid of proper soil conservation activities. Because of its landscape, the country has been losing billions cubic meters of fertile soil due to water and wind erosion. A World Bank (2013) study indicates that the country loses between 2 to 5 percent of its agricultural GDP per annum due to the adverse impacts of land degradation.

The government of Ethiopia and its development partners ventured to tackle the long-standing issue of natural resources degradation by designing the Sustainable Land Management Program (SLMP), implemented in two phases since 2008. The SLMP is designed to conserve soil fertility lost due to difficult topography of the country and preserve biodiversity, sustain agricultural growth, and reduce vulnerabilities resulting from chronic food insecurity.

The first phase of SLMP (SLMP-I) was implemented during 2008-2013 in six regional states of the country by introducing sustainable land management practices in select degraded areas deemed uneconomical and unproductive. Towards this end, SLMP-I benefited about 98,000 rural households (World Bank, 2013).<sup>42</sup> Preliminary assessment of SLMP-I by the then-Ethiopian Ministry of Agriculture indicated that the program has brought improvements in land management practices and helped generate additional income for program beneficiaries, justifying project extension and the birth of the second phase of SLMP (SLMP-II) (MOA, 2013).

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<sup>42</sup> Some of the interventions include rehabilitation of degraded communal lands, construction of cut-off drains and waterways, planting of nitrogen-fixing leguminous plants, production, and application of compost.

SLM-II, implemented over 2014-2019, facilitates investment in sustainable land management, increases and sustains agricultural productivity through integrated land and water management practices, and protects ecosystems in 135 watersheds found in the regional states of Amhara, Tigray, Oromia, SNNPR, Gambela, and Benishangul—thus covering an estimated 1.9 million direct and indirect beneficiaries. SLMP-II has three major components: integrated watershed and land management; institutional strengthening, capacity development, and knowledge generation and management; and rural land administration, certification, and use.

SLMP-II is governed by a national steering committee comprising representatives from the Ministry of Agriculture and Natural Resources (MoANR), the Ministry of Finance and Economic Cooperation (MoFEC), the Ministry of Water, Irrigation, and Electricity, the Ethiopian Institute of Agricultural Research, and the Ministry of Environment, Forestry, and Climate Change (MoEFCC). MoANR is responsible for the overall coordination and implementation of the project at the federal level. The ministry has designed a structure that extends to the kebeles, which are the ultimate project implementers. While the World Bank is the main financier of the project, bilateral organizations like Germany's KfW/GIZ are involved by way of providing thematic investments as well as institutional strengthening and capacity building assistances.

Although a project of this magnitude usually attracts the attention of researchers that conduct experimental and quasi-experimental impact evaluations, the impact of both phases of SLM is not well researched. From the few evaluations conducted, the program has brought improvement to different outcomes. For instance, Schmidt and Tadesse (2015) find that households engaging in the SLM program during 2010-2014 increased their crop production by 18 percent compared to a control group.



## 5 Financing FNS needs in Ethiopia

### 5.1 Government efforts toward financing FNS in Ethiopia

The Ethiopian government's resource allocation to programs in food and nutrition security demonstrate a strong commitment towards implementing the different FNS programs. Ethiopia allocates more than 70 percent of its annual budget towards sectors that reduce poverty (UNDP, 2015). Moreover, for the period 2006-2012, government expenditure on agriculture was high, more than 10 percent, with average annual growth rate of 22.5 percent (FAO, 2014). The Productive Safety Net Program and the Household Asset Building Program (HABP) component of the PSNP make up close to 80 percent of public expenditure on food and agriculture (FAO, 2014).<sup>43</sup> In fact, the main components of agriculture expenditures include payments to PSNP beneficiaries in the form of direct food aid and cash transfers (23 percent), knowledge dissemination including capacity building and training (22 percent),<sup>44</sup> infrastructure building (15 percent), and subsidies to agricultural inputs like fertilizer and improved seeds (11 percent).

Financing FNS and development projects in the presence of multiple competing needs stretches the capacity of the government. The paucity of budgetary sources mainly sourced from domestic resources and weak tax collection has exacerbated the problem. The latest report by the National Bank of Ethiopia (NBE, 2016) indicates that government revenue share of GDP is only 15 percent (NBE, 2016), which is very low even by regional standards, where the average tax share of GDP for sub-Saharan Africa is 21 percent (IMF, 2015). Although resource allocation under the federal structure of the country is guided by [equity considerations](#) when formulating budgetary requirements of and [allocation](#) to the regional states, the mere size of the resource needs has put the country under financial stress.

### 5.2 The role of international actors in financing FNS in Ethiopia

In addition to the Ethiopian government's contribution to FNS, strong bilateral and multilateral donor support has been rendered in financing food and security programs of the country. According to FAO (2014), the share of donor aid in food and agriculture expenditure increased from 63.8 percent in 2006 to around 83.4 percent in 2012. For instance, a preponderant part of PSNP (98 percent) during the 2006-2012 period was funded by external sources. According to the

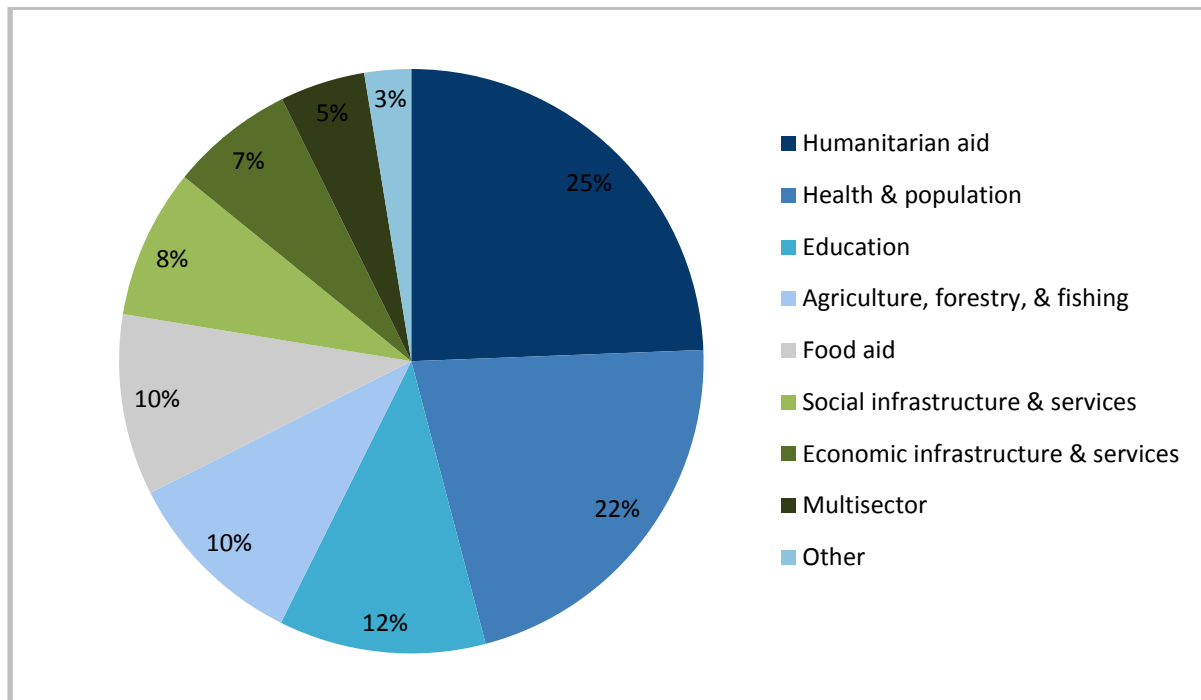
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<sup>43</sup> MAFAP/FAO (2014) deals with period between 2006-2012 that is why the percentage share of PSNP is very high; however, there is a component called other payments in which AGP is costed.

<sup>44</sup> The knowledge dissemination component in this context refers to the training and capacity building provided to producers and other agents in the value chain, e.g., training on infrastructure maintenance, farming techniques, marketing, etc.

OECD, in 2012 and 2013, Ethiopia was the second-highest recipient of agricultural and rural development aid in the world, second to Afghanistan (OECD, 2013).<sup>45</sup> Between 2009 and 2013, 20 percent of total committed ODA to Ethiopia went toward agriculture and food aid. Humanitarian aid, health, and education make up the other key ODA recipient sectors (Figure 9).

**Figure 9. Bilateral ODA commitment, by purpose, percentage of total (2009-2013 average)**



Source: OECD.

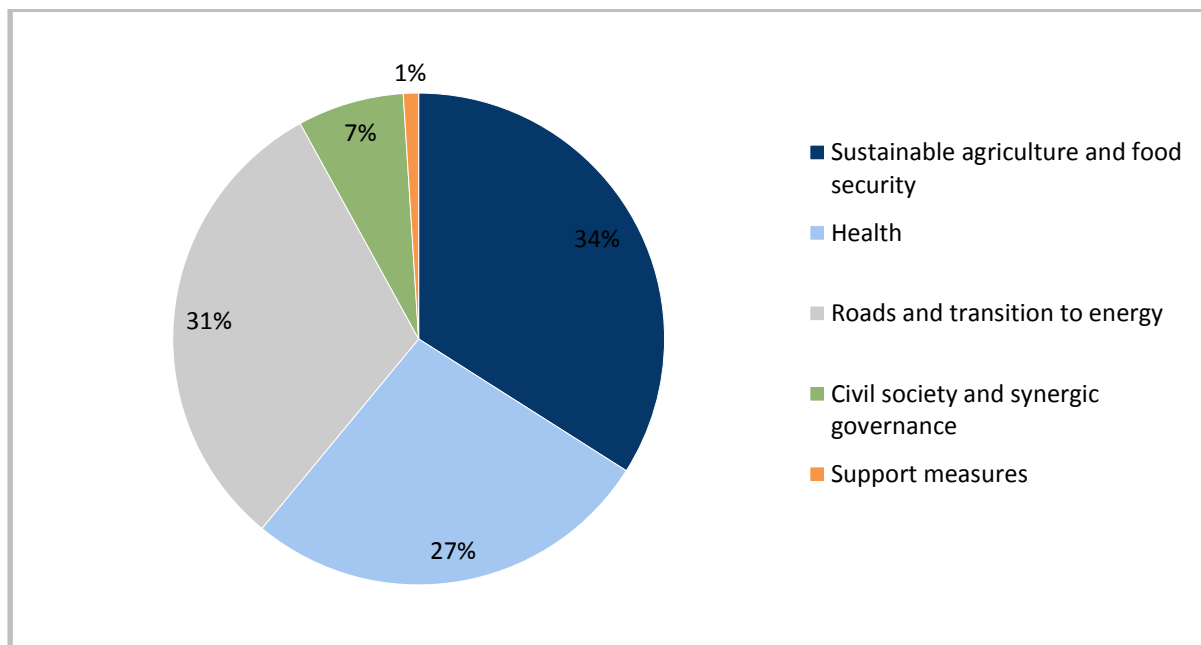
The United States alone contributes to 21.7 percent of agricultural ODA to Ethiopia, while EU institutions provide 9.4 percent. The United States’ provision of development assistance to Ethiopia is geared towards agricultural modernization. One example of USAID’s agricultural initiatives in Ethiopia is the Ethiopia: Land Tenure and Administration Program, a 5-million-dollar program that supports and enables a land reform system that favors agricultural modernization. Another channel of assistance from the United States is through Feed the Future (FtF). In 2011, FtF allocated more than \$40 million in nutrition and agricultural development aid to Ethiopia. Both initiatives focus on the transformation of “Pastoral Ethiopia” into a more productive, commodity-exporting region (Oakland Institute, 2013). Whereas the United Kingdom’s Department for

<sup>45</sup> [The Development Assistance Committee: Enabling Effective Development- Aid to Agriculture and Rural Development.](#)

International Development's (DFID) largest share of overseas development assistance in nutrition went to Ethiopia, amounting to \$227 million in 2015 alone (MQSUN, 2017).

The European Development Fund (EDF), the EU's aid-disbursing instrument, aims to allocate 745 million euros (\$790 million) to Ethiopia during the 2014-2020 funding cycle.<sup>46</sup> The funds are set to go toward sustainable agriculture and food security, among other projects. As seen in Figure 10 below, the sustainable agriculture and food security sector is set to receive one-third of the funds, with the remaining funds split between health, infrastructure, and civil society. In its latest National Indicative Program for Ethiopia, the EDF announced the funds will be specifically geared toward supporting Ethiopia's triple objective—as highlighted in the GTP document—of augmenting agricultural output, improving sustainable natural resource management, and protecting vulnerable people by creating long-term resilience.

**Figure 10. Fund allocation by sector**



Source: European Development Fund.

The CAADP framework has also helped the country mobilize additional resources for its agricultural programs, both internally and from external sources (Poulton et al., 2014). Following the G-8 meeting in Italy in 2008, Ethiopia was pledged significant amount of resources for its agricultural programs.

<sup>46</sup> [European Development Fund \(2014\), National Indicative Program for Ethiopia: 2014-2020](#)

In the past decade, Ethiopia has experienced two main trends in development co-operation. The first is the marked decrease in the share of humanitarian aid. The second is the increased share of development assistance provided in the form of concessional loans compared to grants, according to Development Assistance Group (DAG) in Ethiopia.<sup>47</sup>

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<sup>47</sup> Development Assistance Group Ethiopia (DAG), [ODA to Ethiopia](http://dagethiopia.org/new/oda-to-ethiopia) accessed from <http://dagethiopia.org/new/oda-to-ethiopia>

## 6 Conclusion and policy recommendations

The emerging pattern from global and national statistics points toward three priority areas for improving Ethiopia's food and nutrition security and achieving the targets set forth by the Malabo Declaration and SDG2. First, improving access to food (by reducing extreme poverty and expanding coverage and adequacy of social safety nets), raising awareness on the adoption of balanced nutrition, and mobilizing resources for improving FNS needs are key intervention areas. Second, reducing vulnerability to (and mitigating the effects of) consumption and income shocks through mechanisms such as rural safety nets programs, income diversification, and agricultural insurance is crucial. Third, building the productive capacity of agriculture to enable the sector to sustainably maintain long-term food security is vital for success.

Ethiopia's GTPs, in line with Malabo and SDG2 objectives, clearly outline the government's plans to address FNS needs, but greater domestic and external resources must be mobilized to carry out the plans and address outstanding implementation gaps.

### **Recommendations for national policymakers**

- Improve labor productivity by promoting the production and consumption of high nutritional value agricultural products by addressing the technological/infrastructural gap on the production and sale of perishable products such as vegetables, milk, and products rich in protein.
- Increase access to productivity-enhancing inputs and markets while at the same time promoting nutrition-sensitive agricultural practices by putting emphasis on the consumption and the nutritional value of what is being produced.
- Strengthen the capacity of health extension workers and development agents, enhance their coordination, and jointly assist rural farmers with the practice of nutrition-sensitive agricultural production and more diversified diets.
- Address multi-sectoral coordination (especially horizontal coordination of line-ministries).
- Plan for scaling up and sustaining social safety net programs, even in the absence of external support, and mainstream risk mitigation through routine planning and creating generation of qualified Ethiopian experts in risk professionalism.
- Further domestic resource mobilization efforts (notably by promoting private sector investment in the sector and treating farmers as entrepreneurs).

- Ensure a local presence through public and NGO partnerships, and create an enabling environment for these partnership, while also addressing resource fragmentation.
- Attract FDI while also tackling the root causes of low conversion rate of FDI projects in the sector, through the establishment and promotion of risk sharing and insurance mechanisms.
- Improve the volume and diversity of exports, through new and existing opportunists such as G-20's Compact with Africa, agro-industrial park promotions, and AGOA.
- Empower catalytic agencies and institutions, but, at the same time, support capacity building and get the incentive structures right for staff of implementing public institutions to ensure uptake of innovations at the national level.
- Facilitate rigorous impact evaluations of the programs through quality baseline and subsequent data collections of the programs. Data collection, especially on nutrition and financial resources, is also vital for efficient targeting of places and individuals with highest needs and for facilitating accountability of implementation, and
- Assess the country's relative performance in FNS on a regular basis and learn from regional and peer countries' best practices in achieving SDG2 and the Malabo targets.

### **Recommendations for donors**

- Build on the lessons learned from the PSNP, especially those that indicate that continuous evaluation and donor coordination are key for successful implementation.
- Make complementary investments to relax resource constraints, notably in nutrition and CRGE programs and at lower administrative units as well as promotion of the livestock sector. The donor community can also assist in getting the wage incentives right to improve human capacity constraints of under-privileged regions to boost local implementation capacity.
- Provide technical assistance in interventions that are knowledge- and technology-intensive programs, while at the same time build local capacity to ensure sustainability.
- Explore the potential of NGO clustering and Core Humanitarian Standard (CHS) certification to improve efficiency and accountability.
- Promote the establishment of agricultural insurance programs and mainstream humanitarian/resilience auditing into lending practices, similar to the practice of gender auditing, thus encouraging productive and equitable distribution of resources.

- Facilitate knowledge and experience sharing of successful FNS projects, programs, processes, and implementation, and
- Empower the local community and invest in its youth to promote ownership and sustainability of FNS programming on a long-term basis.

## 7 Appendix

### List of stakeholders interviewed

#### I. National policy makers

1. Agricultural Transformation Agency (ATA)- (with Khalid Bomba (CEO of ATA) and focus group discussion with team of experts at ATA)
2. Ministry of Agriculture and Natural Resources (MoANR) (with Behailu Shewangizaw (PSNP capacity development and monitoring and evaluation senior expert) and Hailu Ankiso (PSNP monitoring and evaluation senior expert))
3. Ministry of Finance and Economic Cooperation (MoFEC) (with Tefera Demeke (Budget Preparation and Administration Directorate) and Firehiywot Handamo (team leader, Fiscal policy Directorate, Fiscal policy research))
4. National Planning Commission (NPC) (with Demeke Tsehay- agriculture, natural resource and environment planning specialist)
5. National Disaster Risk Management Commission (NDRMC) (with Tadesse Bekele Fanta- Senior DRM Adviser)
6. Ethiopian Public Health Institute (EPHI) (with Solomon Eshetu, Food science and research directorate, acting director)
7. Ministry of Environment, Forest and Climate Change (MoEFCC) (Dr. Yigeremachew Seyoum, -project coordinator for the action against desertification)
8. Oromiya Disaster Risk Management Commission (with Mulatu Negassa, director disaster risk and early warning system; Dawud Musa, senior technical expert )
9. Environment and Climate Research Center (ECRC), Environment for Development Initiative (focus group discussion with Hailesselsie Medihin, Center Director and team of experts at ECRC)

#### II. Development partners

1. World Bank (WB)-Ethiopia office (focus group discussion with Anne Margreth Bakilana- Senior Economist and team of experts at WB-Ethiopia)
2. International Fund for Agricultural Development (IFAD)-Ethiopia office (with Demirag, Han Ulac, country director of Ethiopia)
3. African Development Bank (AfDB)-Ethiopia office ( with SENNOGA, EDWARD BATTE, Chief County Economist of Ethiopia)
4. United Nations Economic Commission for Africa (UN ECA) ( with Adama Ekberg Coulibaly (Chief, Food Security, Agriculture and Land Section and Medhat Elhelepi, Economic affairs Officer at Regional Integration and Trade Division (RITD)) and focus group discussion with team of experts at UN ECA)
5. Dan Church Aid- Ethiopia office (with Wakgari Alemu Sirika, DRR specialist)
6. Save the Children (with Abbott, Daniel (Deputy Chief of Party for Growth through Nutrition))
7. Care Ethiopia (with Selamawit Menkir | CARE Ethiopia CO | Programme Quality and Learning, Coordinator)
8. World Vision Ethiopia (with Assefa Admasu, food security specialist)
9. Department for International Development (DFID)-Ethiopia (with Berhanu Lakew, Senior Economist)



**Table A1a: Food and nutrition security needs in Ethiopia**

| Indicators   | Ethiopia | Regional average | Global ranking | Sub-Saharan Africa comparison |
|--|----------|------------------|----------------|-------------------------------|
| <b>Calorie gap</b>                                 |          |                  | <b>102</b>     |                               |
| Undernourishment                                   | 35.1%    | 19.82%           | 90             | Bottom 10                     |
| Average dietary energy supply adequacy             | 97.2%    | 114.46%          | 100            | Bottom 10                     |
| Lack of enough money to buy food                   | 42.02%   | 53.82%           | 58             |                               |
| <b>Dietary diversity</b>                           |          |                  | <b>90</b>      |                               |
| Percent of calories from staples                   | 76%      | 61.81%           | 102            | Bottom 10                     |
| Average protein supply                             | 61%      | 64.34%           | 72             |                               |
| Food consumption score (percent with "poor" score) | 35.61%   | 33.69%           | 20             | Bottom 10                     |
| <b>Child malnutrition</b>                          |          |                  | <b>91</b>      |                               |
| Under-5 wasting                                    | 10.1%    | 7.80%            | 90             | Bottom 10                     |
| Under-5 stunting                                   | 44.2%    | 34.73%           | 98             | Bottom 10                     |
| Anemia in children                                 | 51%      | 60.03%           | 74             |                               |
| <b>Rural poverty</b>                               |          |                  | <b>74</b>      |                               |
| Rural poverty rate                                 | 37.80%   | 51.40%           | 48             |                               |
| Rural multidimensional poverty headcount           | 96.27%   | 69%              | 81             | Bottom 10                     |

Source: Own calculations based on ERH database.

Note: The above statistics represents a five-year average for the period 2009-2013.

**Table A1b: Enabling policy environment for agricultural productivity**

| Indicators                                       | Ethiopia | Regional (SSA) average | Unit of measurement/<br>Score definition  | Ethiopia's policy strength score (relative to global best practice) | Sub-Saharan Africa comparison |
|--|----------|------------------------|---|---|-------------------------------|
| Enabling conditions for rural financial services | 4.52     | 3.66                   | A score ranging 1-6, 6 being best). 5 = Government development plans fully recognize the importance of a well-functioning rural finance subsector.  | 70  | Top 10                        |
| Access to water for agriculture                  | 4.22     | 3.63                   | A score (1-6, 6 being best). 4 = Government has a water resources management strategy that provides an integrated framework for equitable water resources allocation.   | 64  | Top 10                        |
| Access to land                                   | 3.66     | 3.54                   | A score (1-6, 6 being best). 4 = A majority of rural poor households, including women, indigenous populations and other vulnerable groups, have access to land  | 53  |                               |
| Women's secure access to land                    | 0.5      | 0.55                   | An index (0-1, with 1 representing the least parity between men and women). 0.5 = The law guarantees women and men equal rights to own, use and control, but some customary, traditional or religious practices discriminate against women.             | 50  |                               |
| Women's access to financial services             | 0.5      | 0.40                   | An index (0-1, with 1 representing the least parity between men and women). 0.5 = The law guarantees women and men equal rights to access formal financial services, but some customary, traditional or religious practices discriminate against women. | 0   |                               |
| Access to agricultural input markets             | 3.75     | 3.72                   | A score (from 1-6, 6 being best). 4 = Significant government efforts to liberalize markets and reduce rural market distorting policies.   | 45  |                               |

| General investment climate                                   |       |       |  |    |        |
|--|-------|-------|--|----|--------|
| Investment climate for rural business                        | 4.21  | 3.71  | A score (from 1-6, 6 being best) 4 = Government is making efforts to encourage private traders to open a business.   | 64 | Top 10 |
| Doing Business index   | 50.43 | 48.10 | An index that ranks countries based on their ease of doing business with higher rankings indicating better, usually simpler, regulations for businesses and stronger protections of property rights.   | 50 |        |
| Allocation and management of resources for rural development | 4.94  | 3.67  | A score (from 1-6, 6 being best) For Ethiopia, 5 = Its national development plan and budget document emphasize the important role of agriculture in poverty reduction and economic growth, and its policies are consistent with that analysis. | 79 | Top 10 |
| Dialogue with rural organizations                            | 4.06  | 3.82  | A score (1-6, 6 being best). 4 = There is a process for rural organizations to enter into dialogue with or lobby government.   | 61 |        |

| Nutrition policies                        |     |        |   |     |  |
|---|-----|--------|---|-----|--|
| National dietary guidelines               | 0.5 | 0.34   | A binary score that measures whether the government has published guidelines for a balanced and nutritious diet, where 0 = No and 1 = Yes (and anything in between reflects averages across years).   | 50  |  |
| Time bound nutrition targets              | 0.5 | 0.33   | A binary score that measures whether governments identify time bound nutrition targets in public policy documents, where 0 = No and 1 = Yes (and anything in between reflects averages across years).   | 50  |  |
| Governments promote complementary feeding | 1.0 | 0.82   | A binary score that measures whether governments promote complementary feeding practices of children aged 6–9 months and continued breastfeeding of children at ages 12–15 and 20–23 months, where 0 = No and 1 = Yes (and anything in between reflects averages across years). | 100 |  |
| Food safety score                         | 73% | 50.21% | The percentage of the WHO's recommended International Health Regulations related to food safety that has been attained.   | 69  |  |

Source: Own calculations based on ERH database. For further information on each of these scores, please refer to the list of indicators for developing countries available at: <https://endingruralhunger.org/methodology/>.

## Methodological note on the definition and interpretation of Ethiopia’s rankings for its “enabling policy environment” indicators

Ethiopia’s agricultural, economic, trade, and nutrition policies, as well as its prioritization of FNS, were evaluated on the extent to which its national policy documents explicitly integrate strategies to promote an enabling policy environment for achieving FNS and whether the government has made adequate efforts to implement these strategies. All of the indicators included in Table A1b (except for the “doing business index” and “food safety score” indicators) are categorical variables (binary or discrete) representing a score that corresponds with a qualitative description. In the “Ethiopia” and “Regional (SSA) average” columns of Table A1b, these scores have been averaged over the study period (2009-2013) to provide a general picture of the country and region’s performance during this time. Though the indicators were originally constructed as numeric, categorical variables, the averages from 2009-2013 often include fractions. As seen in the “Unit of measurement/Score definition” column of Table A1b, Ethiopia’s scores have been interpreted by rounding scores with fractions to the closest whole number.<sup>48</sup>

The values of the “Policy strength score (relative to global best practice)” column were drawn from the Ending Rural Hunger rankings, which use a “distance to the frontier” methodology to compute how far Ethiopia’s value is relative to global best value.<sup>49</sup> In essence, this indexing methodology involves transforming each indicator onto a common 0-1 scale by identifying each country’s best score across the sample years to create a frontier sample. From this sample, the best “frontier” and the “worst” scores are identified. Then each country score, X, is transformed by the formula  $(\text{worst} - X) / (\text{worst} - \text{frontier})$  to generate a score between 0 and 1, which is then multiplied by 100. Scores are averaged over the 2009-2013 period, where available. Furthermore, the “Sub-Saharan Africa comparison” column shows whether Ethiopia’s score falls between the bottom 10 and top 10 scores within the SSA region.

The construction and interpretation of the score of the variables included in Table A1b is presented below:

1. Indicators on **access to key agricultural inputs** such as rural finance, water, land, and input markets, were collected through the International Fund for Agricultural Development’s (IFAD) Rural Sector Performance Assessments and constructed as categorical/qualitative variables ranging between 0 and 6, with 6 indicating the best performance. Meanwhile, the **women’s enabling environment** indicators, drawn from the Organization for Economic Cooperation and Development’s (OECD) Social Institutions and Gender Index, are indices ranging from 0 to 1, with 0 representing the greatest parity between men and women and 1 representing the least parity.
2. **Rural investment climate** indicators again come from the International Fund for Agricultural Development’s (IFAD) Rural Sector Performance Assessments and are constructed as categorical/qualitative variables ranging between 0 and 6, with 6 indicating

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<sup>48</sup> While this method provides a rough snapshot of a policy’s strength over a period of time, more detailed analysis of the yearly data is needed to determine if the policy quality improved or declined within the time period.

<sup>49</sup> For more information on the Ending Rural Hunger project’s application of the distance to the frontier methodology please see the Ending Rural Hunger: Methodological Note available at: <https://endingruralhunger.org/methodology/>.

the best performance—except for the doing business index, which is produced by the World Bank and ranges from 1 to 100, with 100 being the best business environment and 0 being the most restrictive business environment.

3. **Nutrition policy** indicators are binary scores from the Economist Intelligence Unit's Global Food Security Index and the Institute of Development Studies' Hunger And Nutrition Commitment Index with 0 indicating no and 1 indicating yes—except for the food safety score, which is the percentage of the WHO's recommended International Health Regulations related to food safety that have been attained.

**Table A2: Regional distribution of rural food and nutrition insecurity in Ethiopia**

| Region                   | Diet quantity | Diet quality  |   | Economic vulnerability                        |   |   | Rural population projections (2012) |
|--------------------------|---------------|---|---|---|---|---|-------------------------------------|
|                          |               | >75% of total household calories coming from starch staples (% of households) | Low dietary diversity (<=3 food groups over 7 days) (% of households) | Below absolute poverty line (% of households) | Below food poverty line (% of households) | 75% or more of total expenditures on food (% of households) |                                     |
| <b>Tigray</b>            | <b>44%</b>    | <b>61%</b>  | 25%   | <b>29%</b>                                    | <b>33%</b>                                | <b>2%</b>   | 3,966,184                           |
| <b>Afar</b>              | 38%           | 57%   | <b>65%</b>  | <b>33%</b>                                    | 27%                                       | <b>13%</b>  | 1,389,476                           |
| <b>Amhara</b>            | <b>51%</b>    | 36%   | <b>41%</b>  | <b>24%</b>                                    | <b>38%</b>                                | <b>3%</b>   | 16,551,144                          |
| <b>Oromia</b>            | 39%           | <b>65%</b>  | 22%   | <b>24%</b>                                    | 28%                                       | 1%  | 27,758,658                          |
| <b>Somali</b>            | <b>40%</b>    | 46%   | <b>43%</b>  | <b>27%</b>                                    | 22%                                       | <b>6%</b>   | 4,427,101                           |
| <b>Benishangul Gumuz</b> | 37%           | 35%   | 19%   | <b>24%</b>                                    | <b>30%</b>                                | <b>3%</b>   | 849,335                             |
| <b>SNNPR</b>             | 27%           | <b>75%</b>  | <b>47%</b>  | <b>25%</b>                                    | 22%                                       | <b>4%</b>   | 15,619,635                          |
| <b>Gambela</b>           | 30%           | <b>60%</b>  | <b>35%</b>  | <b>25%</b>                                    | 19%                                       | <b>10%</b>  | 288,070                             |
| <b>Harari</b>            | 15%           | <b>86%</b>  | 17%   | 9%  | 4%  | 0%  | 96,222                              |
| <b>Dire Dawa</b>         | 19%           | <b>80%</b>  | 18%   | 12%   | 12%                                       | 1%  | 122,950                             |
| <b>Rural</b>             | 40%           | 58%   | 34%   | 24%   | 29%                                       | 2%  | <b>71,146,269</b>                   |

Source: CFSVA 2014, DHS (2011).

**Table A3: Regional distribution of child malnutrition in Ethiopia**

|  | Height-for-age<br>(stunting, %<br>below 2 SD) | Weight-for-<br>height<br>(wasting, %<br>below 2 SD) | Weight-for-age<br>(underweight,<br>% below 2 SD) | Any<br>anemia<br>(<11.0 g/dl) |
|--|---|---|--|-------------------------------|
| <b>Critical threshold<br/>(global)</b> | <b>40</b>                                     | <b>15</b>   | <b>30</b>  | <b>40</b>                     |
| <b>Tigray</b>                          | <b>51.4</b>                                   | 10.3  | 35.1   | 37.5                          |
| <b>Afar</b>                            | <b>50.2</b>                                   | 19.5  | 40.2   | 74.7                          |
| <b>Amhara</b>                          | <b>52</b>                                     | 9.9   | 33.4   | 35.1                          |
| <b>Oromiya</b>                         | <b>41.4</b>                                   | 9.7   | 26   | 51.7                          |
| <b>Somali</b>                          | 33  | 22.2  | 33.5   | 68.7                          |
| <b>Benishangul-Gumuz</b>               | <b>48.6</b>                                   | 9.9   | 31.9   | 46.5                          |
| <b>SNNP</b>                            | <b>44.1</b>                                   | 7.6   | 28.3   | 36.9                          |
| <b>Gambela</b>                         | 27.3  | 12.5  | 20.7   | 50.9                          |
| <b>Harari</b>                          | 29.8  | 9.1   | 21.5   | 55.5                          |
| <b>Addis Ababa</b>                     | 22  | 4.6   | 6.4  | 33.2                          |
| <b>Dire Dawa</b>                       | 36.3  | 12.3  | 27.6   | 62.9                          |
| <b>Total</b>                           | <b>44.4</b>                                   | <b>9.7</b>  | <b>28.7</b>                                      | <b>44.2</b>                   |

Source: DHS (2011).



**Table A4: Selected targets of GTP I and II**

| <b>Sector indicator</b>                                      | <b>Unit of measurement</b>              | <b>Baseline 2009/ 10</b> | <b>Plan targets 2014/15</b> | <b>Actual 2014/15</b> | <b>5-year growth performance</b> | <b>Plan targets 2019/20</b> |
|--|---|--------------------------|-----------------------------|-----------------------|----------------------------------|-----------------------------|
| <b>The macroeconomy</b>                                      |   |                          |                             |                       |                                  |                             |
| Real GDP growth rate   | Percent                                 | 10.4                     | 11.4                        | 11.4                  | 9.6%                             | 10                          |
| <b>Poverty and welfare</b>                                   |   |                          |                             |                       |                                  |                             |
| Total poverty headcount                                      | Percent                                 | 29.2                     | 22.2                        | 29.60                 | 1.4%                             | 16.7                        |
| <b>Infrastructure development</b>                            |   |                          |                             |                       |                                  |                             |
| <b>Roads</b>   |   |                          |                             |                       |                                  |                             |
| All weather road length as a share of total road network     | 1000s of km                             | 48.8                     | 64.5                        | 120                   | 145.9%                           | 220                         |
| Average time taken to all-weather road                       | Hours                                   | 3.7                      | 1.4                         | 1.5                   | -59.5%                           | 0.8                         |
| Road density   | Kilometers per 1000s of km <sup>2</sup> | 44.5                     | 123.7                       | 109                   | 144.9%                           | 200                         |
| Roads in acceptable condition                                | Percent                                 | 81                       | 86.7                        | 70                    | -13.6%                           | 80                          |
| Area further than 5km from all-weather roads                 | Percent                                 | 64                       | 29                          | 33.6                  | -47.5%                           | 13.5                        |
| <b>Energy</b>  |   |                          |                             |                       |                                  |                             |
| Electricity coverage   | Percent                                 | 41                       | 75                          | 60                    | 46.3%                            | 90                          |
| <b>Telecommunications</b>                                    |   |                          |                             |                       |                                  |                             |
| Fixed line telephone density                                 | Percent                                 | 1.36                     | 3.4                         | 10.5                  | 672.1%                           | 54                          |
| Mobile telephone access/distribution                         | Percent                                 | 8.7                      | 45                          | 43.9                  | 404.6%                           | 100                         |
| <b>Water</b>   |   |                          |                             |                       |                                  |                             |
| Overall potable water coverage                               | Percent                                 | 68.5                     | 98.5                        | 58                    | -15.3%                           | 83                          |
| Rural population with access to potable water within 0.5 km  | Percent                                 | 65.8                     | 98                          | 59                    | -10.3%                           | 85                          |
| Land developed for medium and large scale irrigation schemes |   | 2.5                      | 15.6                        | 12.9                  | 416.0%                           | 18.7                        |
| <b>Health</b>  |   |                          |                             |                       |                                  |                             |
| Primary health services coverage                             | Percent                                 | 89                       | 100                         | 94                    | 5.6%                             | 100                         |
| Under-5 mortality rate                                       | Per 1000 children                       | 101                      | 68                          | 68                    | -32.7%                           | 30                          |
| Infant mortality rate  | Percent                                 | 77                       | 31                          | 46.4                  | -39.7%                           | 19.3                        |

|  |                         |     |     |     |        |     |
|--|-------------------------|-----|-----|-----|--------|-----|
| Maternal mortality rate                      | Per 100,000 live births | 590 | 267 | 420 | -28.8% | 199 |
| Births attended by skilled health personnel  | Percent                 | 25  | 60  | 41  | 64.0%  | 95  |
| Under one year penta 3 immunization coverage | Percent                 | 82  | 96  | 82  | 0.0%   | 96  |
| Stunting rate                                | Percent                 | 46  | 37  | 40  | -13.0% | 21  |
| Wasting rate                                 | Percent                 | 11  | 3   | 9.7 | -11.8% | 4.9 |

*Source: Own calculations based on GTP I and GTP II documents.*

**Table A5: Mapping FNS-specific targets of GTP 1 with the Sustainable Development Goals and Malabo Declaration**

| SDG Targets   | Malabo Declaration   |  | GTP I  |   |
|---|--|--|--|---|
|   | Target   | Objective  | Target   | Indicator   |
| <p><i>Goal 2:</i> By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment</p> | <p>Sustain agricultural GDP growth of at least 6%</p>  | <p>Ensure food security and support the food industry by increasing crop production</p>                                    | <p>Increase in major food crops production; Increase in size of land covered with major food crops</p>     | <p>Major food crops production (in thousands of tons); Land covered with major food crops (in thousands of hectares)</p>  |
|   | <p>Accelerate agricultural growth by at least doubling current agricultural productivity, by the year 2025</p> | <p>Increase crop productivity by applying good agricultural practices</p>  | <p>Increase in major food crops productivity</p>   | <p>Average food crop productivity (quintal/hectare)</p>   |
| <p><i>Goal 2:</i> Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries</p>   | <p>Facilitate sustainable and reliable production and access to quality and affordable inputs</p>              | <p>Improve agricultural production and productivity by improving extension service utilization and agricultural inputs</p> | <p>Improve natural resource conservation and agricultural input use through enhanced extension service</p> | <p>Total number of extension service beneficiary household ('000)</p>   |
|   |  |  | <p>Improve natural resource conservation and agricultural input use through enhanced extension service</p> | <p>Number of extension service beneficiary female headed farmers (30 percent)</p>   |
|   |  |  | <p>Enhance extension workers training</p>  | <p>Number of extension workers specialized in agricultural products that can be produced with the country's agro-ecological zones and crops with high value</p> |

|  |   |                               |   |   |
|--|---|-------------------------------|---|---|
|  |   |                               | Increase agricultural input supply  | Improved seed in thousands of quintal   |
|  |   |                               | Increase agricultural input supply  | Chemical fertilizer in tons ('000)  |
|  |   |                               | Increase construction of quality road infrastructure  | Road density (kilometers per 1000s of km <sup>2</sup> )                                       |
|  | Facilitate the supply of appropriate knowledge, information and skills to users. Facilitate suitable, reliable and affordable mechanization and energy supply, among others | Enhance agricultural research | Increase in improved agricultural research technology outputs for increased agricultural productivity | Cumulative number of research conducted and adequate technology obtained on crop productivity |

| SDG Targets   | Malabo Declaration  |  | GTP I  |  |
|---|---|--|--|--|
|   | Target  | Objective                                | Target   | Indicator  |
| Goal 2: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality | Enhance investments for resilience building initiatives, including social security for rural workers and other vulnerable social groups, as well as for vulnerable ecosystems | Strengthen natural resource conservation | Implement sustainable land use and management system | Male headed/female headed farmers certified with first level land ownership certification in millions  |
|   | Mainstream resilience and risk management in the policies, strategies and investment plans  |  | Implement sustainable land use and management system | Male headed/female headed farmers certified with second level land ownership certification in millions |
|   | Ensure that, by the year 2025, at least 30 percent of our farm, pastoral and fisher households are resilient to climate change and weather related risks                      |  | Implement sustainable land use and management system | Number of woredas implementing land administration systems   |
| Goal 6: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate  | Facilitate efficient and effective water management systems notably through irrigation  |  | Strengthen use of water resource and conservation    | Area of land covered with modern small-scale irrigation in thousands of hectare                        |

|  |  |   |  |   |
|--|--|---|--|---|
| <p><i>Goal 2</i> (same as above) and <i>Goal 13</i>: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</p> | <p>Strengthening strategic food and cash reserves to respond to food shortages occasioned by periodic prolonged droughts or other disasters/emergencies</p>          | <p>Improve disaster mitigation and management</p> | <p>Increase in amount of food reserve for disaster mitigation; Increase budget for disaster mitigation and management</p>      | <p>Food stock in metric tons; Contingency budget in thousands of birr</p> |
|  | <p>Strengthening early warning systems to facilitate advanced and proactive responses to disasters and emergencies with food and nutrition security implications</p> |   | <p>Develop system for disaster prevention and early warning based on disaster profile</p>                                      | <p>Number of woredas with disaster prevention profile</p>                 |
|  | <p>Targeting priority geographic areas and community groups for intervention</p>   |   | <p>Extend early warning and response information exchange system to connect regions, woredas and ware houses by woreda net</p> | <p>Number of people supported in food items in millions</p>               |

| SDG Targets   | Malabo Declaration  |   | GTP I                                       |   |
|---|---|---|---|---|
|   | Target  | Objective   | Target                                      | Indicator   |
| <i>Goal 1:</i> By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions   | Ensure that the agricultural growth and transformation process is inclusive and contributes at least 50 percent to the overall poverty reduction target                                     | Decrease the percentage of the population living below the poverty line | Ensure food security at the household level | Number of male and female headed farmers benefiting from voluntary resettlement programs                        |
| <i>Goal 1</i> (same as above) and <i>Goal 8:</i> By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value | Support and facilitate preferential entry and participation for women and youth in gainful and attractive agri-business opportunities   |   | Ensure food security at the household level | Number of male and female headed farmers benefiting from productive safety net                                  |
|   |   |   |   | Number of male and female headed farms with food insecurity problem benefiting from family level credit package |
|   |   |   |   | Number of male and female headed farmers who graduated from a safety net program                                |
| <i>Goal 2:</i> By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent       | Improve nutritional status, and in particular, the elimination of child under-nutrition in Africa with a view to bringing down stunting to 10 percent and underweight to 5 percent by 2025. | Ensure Implementation of Child Nutrition strategy                       | Reduction in children malnutrition problem  | Stunting (percent)  |
|   |   |   |   | Wasting (percent)   |

|   |  |                        |   |  |
|---|--|------------------------|---|--|
| girls, pregnant and lactating women and older persons   |  |                        |   |  |
| <p><i>Goal 2</i> (same as above) and <i>Goal 3</i>: By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births</p> |  | Reduce child mortality | Ensure improved health service delivery to reduce child mortality | Neonatal mortality (out of 1000)           |
|   |  |                        |   | Reduce IMR per 1,000                       |
|   |  |                        |   | Reduce under-five mortality rate per 1,000 |

Source: SDGs, Malabo Declaration, and GTP I documents.



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